



1847 QT 2247 QT

LOADER

Published 03/12

Part No. F-4369C

OPERATOR'S MANUAL



This Operator's Manual is an integral part of the safe operation of this machine and must be maintained with the unit at all times. READ, UNDERSTAND, and FOLLOW the Safety and Operation Instructions contained in this manual before operating the equipment. C01-Cover

2247 QT



1847 QT

FC-L-0011

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¡ATENCIÓN!
LEA EL INSTRUCTIVO



Si No Lee Ingles, Pida
Ayuda a Alguien
Que Se Lo Lea Para Que le
Traduzca Las
Medidas de Seguridad



To the Owner/Operator/Dealer

All implements with moving parts are potentially hazardous. There is no substitute for a cautious, safe-minded operator who recognizes the potential hazards and follows reasonable safety practices. The manufacturer has designed this implement to be used with all its safety equipment properly attached to minimize the chance of accidents.

BEFORE YOU START!! Read the safety messages on the implement and shown in your manual. Observe the rules of safety and common sense!



WARNING

TO AVOID SERIOUS INJURY OR DEATH:

1. READ AND UNDERSTAND OPERATOR'S MANUAL.
2. TRACTOR MUST BE EQUIPPED WITH ROLL-OVER PROTECTION (ROPS) AND SWAY CHAINS.
3. ALWAYS WEAR SAFETY GLASSES, SAFETY SHOES AND SEAT BELT FASTENED TIGHTLY.
4. STOP TRACTOR, LOCK BRAKES, AND BLOCK UP OR SUPPORT IMPLEMENT SECURELY BEFORE WORKING UNDER RAISED COMPONENTS.
5. ALLOW NO RIDERS AT ANY TIME ON TRACTOR OR IMPLEMENT. FALLING OFF CAN KILL.
6. KEEP BYSTANDERS CLEAR OF MOVING PARTS AND WORKING AREA. KEEP CHILDREN AWAY!
7. DO NOT LIFT, LOWER, OR OPERATE UNLESS EVERYONE IS CLEAR OF IMPLEMENT.
8. USE INCREASED CAUTION ON SLOPES & NEAR BANKS AND DITCHES TO PREVENT OVERTURN.
9. LOCK LIFT LEVER UP FOR TRANSPORT. HAVE SMV SIGN VISIBLE. FOLLOW LOCAL LAWS.
10. USE PARKING STAND OR BLOCK UP WHEN UNHITCHING FROM TRACTOR.

999200

WARRANTY INFORMATION:

Read and understand the complete Warranty Statement found in this Manual. Record the Serial Number and Model Number in appropriate area. DEALER is to complete the Warranty registration ONLINE at ALAMOAG.COM.

1847 QT, 2247 QT

Operator's Manual

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RETAIL CUSTOMER'S RESPONSIBILITY UNDER THE RHINO WARRANTY

It is the Retail Customer and/or Operator's responsibility to read the Operator's Manual, to operate, lubricate, maintain and store the product in accordance with all instructions and safety procedures. Failure of the operator to read the Operator's Manual is a misuse of this equipment.

It is the Retail Customer and/or Operator's Responsibility to inspect the product and to have any part(s) repaired or replaced when continued operation would cause damage or excessive wear to other parts or cause a safety hazard.

It is the Retail Customer's responsibility to deliver the product to the authorized Rhino Dealer, from whom he purchased it, for service or replacement of defective parts which are covered by warranty. Repairs to be submitted for warranty consideration must be made within forty-five (45) days of failure.

It is the Retail Customer's responsibility for any cost incurred by the Dealer for traveling to or hauling of the product for the purpose of performing a warranty obligation or inspection.

UNDERSTAND SIGNAL WORDS

DANGER: Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations.

WARNING: Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION: Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

DEALER PREPARATION CHECK LIST

1847, 2247 QT Loaders

BEFORE DELIVERING MACHINE - The following check list should be completed.

Use the Operator's Manual as a guide.

- ☐ Machine properly assembled.
- ☐ All safety decals readable (See decal page).
- ☐ All bolts tightened to torque specifications given in the torque chart.
- ☐ Machine operates properly.
- ☐ Customer has appropriate mounting kit for his tractor and loader.
- ☐ Operators manual has been delivered to owner and he has been instructed on the safe and proper use of the front end loader.

Dealer's Signature _____

CAUTION

It is recommended that the tractor be equipped with Rollover Protection System (ROPS) and seat belt be used for all loader operations.

WARNING

To avoid serious injury or death, do not handle large heavy objects (large round bales, machinery, etc.) with this loader.

THIS CHECKLIST TO REMAIN IN OWNER'S MANUAL

It is the responsibility of the dealer to complete the procedures listed above before delivery of this implement to the customer.

SAFETY SECTION

SAFETY

General Safety Instructions and Practices

A careful operator is the best operator. Safety is of primary importance to the manufacturer and should be to the owner/operator. Most accidents can be avoided by being aware of your equipment, your surroundings, and observing certain precautions. The first section of this manual includes a list of Safety Messages that, if followed, will help protect the operator and bystanders from injury or death. Read and understand these Safety Messages before assembling, operating or servicing this Implement. This equipment should only be operated by those persons who have read the manual, who are responsible and trained, and who know how to do so responsibly.



The Safety Alert Symbol combined with a Signal Word, as seen below, is used throughout this manual and on decals which are attached to the equipment. The Safety Alert Symbol means: "ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!" The Symbol and Signal Word are intended to warn the owner/operator of impending hazards and the degree of possible injury faced when operating this equipment.

Practice all usual and customary safe working precautions and above all---remember safety is up to YOU. Only YOU can prevent serious injury or death from unsafe practices.



Indicates an imminently hazardous situation that, if not avoided, WILL result in DEATH OR VERY SERIOUS INJURY.



Indicates an imminently hazardous situation that, if not avoided, COULD result in DEATH OR SERIOUS INJURY.



Indicates an imminently hazardous situation that, if not avoided, MAY result in MINOR INJURY.



Identifies special instructions or procedures that, if not strictly observed, could result in damage to, or destruction of the machine, attachments or the environment.

NOTE: *Identifies points of particular interest for more efficient and convenient operation or repair.* (SG-1)



Si no lee ingles, pida ayuda a alguien que si lo lea para que le traduzca las medidas de seguridad. (SG-3)

¡ LEA EL INSTRUCTIVO!



Operate this Equipment only with a Tractor equipped with an approved roll-over-protective system (ROPS). Always wear seat belts. Serious injury or even death could result from falling off the tractor--particularly during a turnover when the operator could be pinned under the ROPS. (SG-7)



SAFETY

DANGER

Never allow children to operate, ride on, or come close to the Tractor or Implement. Usually, 16-17 year-old children who are mature and responsible can operate the implement with adult supervision, if they have read and understand the Operator's Manuals, been trained in proper operation of the tractor and Implement, and are physically large enough to reach and operate the controls easily. (SG-11)



DANGER

Never allow children or other persons to ride on the Tractor or Implement. Falling off can result in serious injury or death. (SG-10)



DANGER

Never allow children to play on or around Tractor or Implement. Children can slip or fall off the Equipment and be injured or killed. Inadvertent contact with controls can cause the Implement to shift or fall crushing themselves or others. (SG-25)

DANGER

DO NOT use drugs or alcohol immediately before or while operating the Tractor and Implement. Drugs and alcohol will affect an operator's alertness and coordination and therefore affect the operator's ability to operate the equipment safely. Before operating the Tractor or Implement, an operator on prescription or over-the-counter medication must consult a medical professional regarding any side effects of the medication that would hinder their ability to operate the Equipment safely. NEVER knowingly allow anyone to operate this equipment when their alertness or coordination is impaired. Serious injury or death to the operator or others could result if the operator is under the influence of drugs or alcohol. (SG-27)



WARNING

Engine Exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to the state of California to cause cancer and birth defects or other reproductive harm. (SG-30)

DANGER

Never walk or work under any raised boom or bucket. The Boom could fall and cause serious bodily injury or death. Always lower the boom and bucket flat on the ground or support the Boom and bucket on safety stands. Unload all hydraulic actuators prior to performing any maintenance. To do this, set the bucket on the ground then kill the tractor engine. Push and pull the control levers in and out several times to remove pressure. Do not work under raised Boom or Bucket unless components are securely blocked up to prevent inadvertent dropping. (SBH-7)

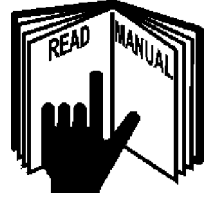
SAFETY

Operator Safety Instructions and Practices

⚠ DANGER

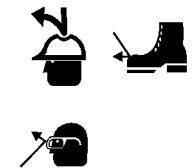
Never operate the Tractor or Implement until you have read and completely understand this Manual, the Tractor Operator's Manual, and each of the Safety Messages found in the Manual or on the Tractor and Implement. Learn how to stop the tractor engine suddenly in an emergency. Never allow inexperienced or untrained personnel to operate the Tractor or Implement without supervision. Make sure the operator has fully read and understood the manuals prior to operation.

(SG-4)



⚠ WARNING

The operator and all support personnel should wear hard hats, safety shoes, safety glasses, and proper hearing protection at all times for protection from injury including injury from items that may be thrown by the equipment. (SG-16)



⚠ CAUTION

PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMANENT HEARING LOSS! Tractors with or without an Implement attached can often be noisy enough to cause permanent hearing loss. We recommend that you always wear hearing protection if the noise in the Operator's position exceeds 80db. Noise over 85db over an extended period of time will cause severe hearing loss. Noise over 90db adjacent to the Operator over an extended period of time will cause permanent or total hearing loss. **NOTE:** *Hearing loss from loud noise [from tractors, chain saws, radios, and other such sources close to the ear] is cumulative over a lifetime without hope of natural recovery.* (SG-17)



⚠ WARNING

Always read carefully and comply fully with the manufacturer's instructions when handling oil, solvents, cleansers, and any other chemical agent. (SG-22)



⚠ DANGER

Never run the Tractor engine in a closed building or without adequate ventilation. The exhaust fumes can be hazardous to your health. (SG-23)

⚠ WARNING

Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the state of California to cause cancer, birth defects or other reproductive harm. (SG-31)

⚠ WARNING

Prolonged operation may cause operator boredom and fatigue affecting safe operation. Take scheduled work breaks to help prevent these potentially impaired operating conditions. Never operate the Implement and Tractor in a fatigued or bored mental state which impairs proper and safe operation. (SG-32)

SAFETY



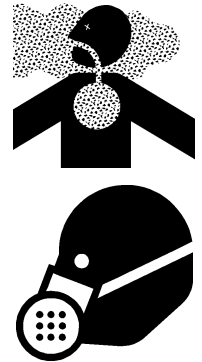
Use extreme caution when getting onto the Implement to perform repairs, maintenance and when removing accumulated material. Only stand on solid flat surfaces to ensure good footing. Use a ladder or raised stand to access high spots which cannot be reached from ground level. Slipping and falling can cause serious injury or death. (SG-33)



Use extreme care when loading, carrying or handling any agricultural fertilizers, chemicals or biological residue. Follow the manufacturer's handling instructions and wear appropriate Personal Protective Equipment including gloves, safety glasses and respirator when required. If you are using a tractor equipped with a cab, make sure the cab is rated for appropriate environmental exposure. Be safe and always wear proper protection. Short or long term exposure to certain chemicals and materials can result in serious injury or death. (SL-19)



Repeated or substantial breathing of hazardous dusts, including crystalline silica, could cause fatal or serious respiratory disease including silicosis. Concrete, masonry, many types of rock, and various other materials contain silica sand. California lists respirable crystalline silica as a substance known to cause cancer. Operation of this equipment under certain conditions may generate airborne dust particles that could contain crystalline silica. In those conditions, personal protective equipment including an appropriate respirator must be used. If excessive dust is generated, a dust collection or suppression system should also be used during operation. (SG-41)



Equipment Operation Safety Instructions and Practices



This Implement may be wider than the Tractor. Be careful when operating or transporting this equipment to prevent the Implement from running into or striking sign posts, guard rails, concrete abutments or other solid objects. Such an impact could cause the Implement and Tractor to pivot violently resulting in loss of steering control, serious injury, or even death. Never allow the Implement to contact obstacles. (S3PT-12)



Never grasp control levers when mounting the machine. (SBH-4)

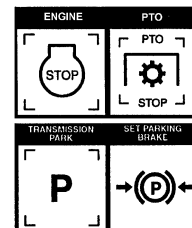
SAFETY

DANGER

The Boom is designed only to position and operate the Bucket which is attached to it. Never attempt to lift, pull, or push other solid objects with the boom or bucket. Serious injury could result from a structural failure when the Boom is used for purposes other than those for which it was designed. (SBH-9)

DANGER

BEFORE leaving the tractor seat lower the implement, set the parking brake and/or set the tractor transmission in parking gear, disengage the PTO, stop the engine, remove the key, and wait for all moving parts to stop. Place the tractor shift lever into a low range or parking gear to prevent the tractor from rolling. Never dismount a Tractor that is moving or while the engine is running. Operate the Tractor controls from the tractor seat only. (SG-9)



WARNING

Do not mount or dismount the Tractor while the tractor is moving. Mount the Tractor only when the Tractor and all moving parts are completely stopped. (SG-12)



DANGER

Start tractor only when properly seated in the Tractor seat. Starting a tractor in gear can result in injury or death. Read the Tractor operators manual for proper starting instructions. (SG-13)



DANGER

Operate the Tractor and/or Implement controls only while properly seated in the Tractor seat with the seat belt securely fastened around you. Inadvertent movement of the Tractor or Implement may cause serious injury or death. (SG-29)

DANGER

DO NOT operate this Implement on a Tractor that is not properly maintained. Should a mechanical or Tractor control failure occur while operating, immediately shut down the Tractor and perform repairs before resuming operation. Serious injury and possible death could occur from not maintaining this Implement and Tractor in good operating condition. (SG-36)

WARNING

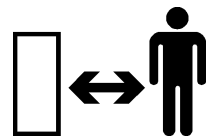
Do Not operate this equipment in areas where insects such as bees may attack you and/or cause you to lose control of the equipment. If you must enter in such areas, use a tractor with an enclosed Cab and close the windows to prevent insects from entering. If a tractor cab is not available, wear suitable clothing including head, face, and hand protection to shield you from the insects. Attacking insects can cause you to lose control of the tractor, which can result in serious injury or death to you or bystanders. Never dismount a moving tractor. (SG-40)

SAFETY



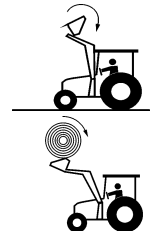
WARNING

Keep bystanders 10 feet away from the tractor and loader while operating. The bystanders could enter the path of the tractor or items could fall from the loader resulting in serious injury to the bystander. (SL-01)



WARNING

For added safety when lifting loads above the height of the operator, install a certified Falling Object Protective Structure. Shiftable loads, round bales, large loose items, and loader attachments can fall toward the operator resulting in serious injury or death. Falling Object Protective Structure (FOPS) rated Cab may be obtained from the tractor dealer or other sources. (SL-02)



WARNING

Before dismounting the tractor and loader lower the loader to the ground or onto solid support blocks. Engage the loader valve travel lock to prevent inadvertent movement of the valve controls causing the loader to suddenly move and drop. Sudden dropping of the loader and attachment could result in serious injury. (SL-05)



CAUTION

Use extra care when turning or stopping. Allow for increased length and weight of added loader. The loader adds five to six feet of length in front of the tractor and significant weight. Allow extra distance when stopping or turning. Do not allow loader or attachment to contact solid objects. (SL-07)



WARNING

Do not raise the loader into an overhead structure or allow a raised attachment to contact overhead structures. Sudden or unexpected contact with an overhead structure could result in serious injury. (SL-08)



DANGER

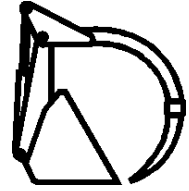
Do not let the loader or attachment contact electrical power lines. Contact with electrical power lines can result in serious injury or electrocution. If the loader attachment contacts a power line remain in the tractor seat until the power has been shut off. Stepping off the tractor can permit electrical current to pass through the body resulting in electrocution. (SL-09)



SAFETY

WARNING

Store the grapple bucket or bale spear attachment with the point(s) on the ground. Walking into the point of the bale or grapple spear can cause serious bodily injury. Never drive the bale spear or grapple bucket attachment forward if a bystander is in front of the loader. (SL-10)



WARNING

Only mount the loader on a tractor that is listed on the mounting instructions. Never mount on a tricycle steering front axle. Move the tractor front and rear wheels to the widest spacing and add the recommended rear tractor ballast to prevent tractor tip over. Keep the tractor tires properly inflated. Maintain at least 25% of the total Tractor and Loader weight including the maximum load in the bucket or attachment on the rear axle. Always wear your seatbelt and make sure the ROPS structure is fully deployed to prevent serious injury or death from the tractor tipping over. (SL-11)

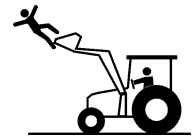
WARNING

Carry the loader and attachment low when transporting to reduce the potential of the tractor tipping over. Transport on slopes only at slow speeds and use gradual turning angles. Tractor wheel contact with any wash out, drop off or ground obstruction with a raised loader could result in the tractor tipping over and causing serious injury. (SL-12)



DANGER

Do not work from the loader or attachments. Do not allow any riders on the loader, tractor or attachments. Falling off the loader could result in serious injury and/or tractor run over. (SL-14)



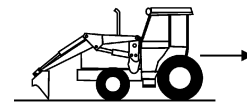
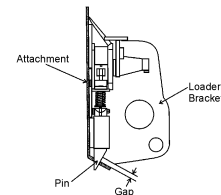
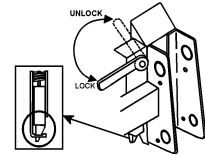
SAFETY

WARNING

Do not use an attachment that is not securely attached to the quick hitch. The attachment could fall resulting in severe crushing injuries or death to the operator or bystanders.



- Rotate both hitch pin levers down to the locked position. You should feel a firm resistance when locking the levers down. The pins must extend through the slots in the bottom of the attachment bracket.
- Examine the fit between the quick hitch and the bottom of the attachment bracket. The pins must extend through the slots in the bottom of the attachment bracket. The tapered side of each pin must be firmly wedged against the surface of the slot on the bottom of the attachment bracket. The attachment bucket should fit snugly against the bottom of the quick hitch bracket. If there is a gap of more than 1/8" or if the pins are not firmly seated do not use the attachment. Contact your dealer before using the attachment.
- On level ground, tilt the attachment down 90° degrees and lower it to the ground. Lower the loader further to slightly raise the front of the tractor off the ground. Drive the tractor in reverse while the attachment is on the ground for 20-30 feet to ensure the attachment does not disconnect. If the attachment disconnects during this process, discontinue the use of the attachment and contact your dealer.



WARNING

NEVER walk or work under or allow any person to be underneath a raised loader or attachment. (SL-15)



WARNING

Do not operate the loader from the ground. Operate the tractor and loader only while seated in the tractor seat with the seatbelt fastened. The loader could fall crushing a person resulting in serious injury or death. (SL-16)

WARNING

Use extreme care when piling material above 6 feet high. Material could shift and fall onto the operator or bystanders. The material could crush or suffocate the operator or bystander resulting in serious injury or death. (SL-17)



SAFETY

⚠ WARNING

Know before you DIG. Call 888-258-0808 and request that all buried utilities locations be identified before digging in unfamiliar ground. Do not let the loader or attachment contact buried electrical power lines, utilities or gas lines. Contact with electrical power lines can result in serious bodily injury or electrocution. If the loader contacts a power line, remain in the tractor seat until the power has been shut off. Stepping off the tractor can permit electrical current to pass through the body resulting in electrocution. (SL-18)

⚠ DANGER

Do not use loader as a jack to raise the tractor tires off the ground. The loader could fail causing the tractor and loader to fall to the ground resulting in serious injury. (SL-25)

⚠ WARNING

Use extreme care when loading, transporting or dumping loads that impair or partially block the operator's line of sight. Know where you are traveling. Make sure no bystanders are in the area of travel. If a bystander assists in providing guidance, make sure they are not in the path of travel. Keep all bystanders 25 feet away from travel path. (SL-29)

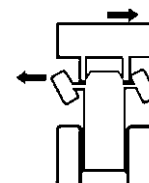
⚠ WARNING

Always look behind you before backing up. Make sure you are looking in the direction of travel. A bystander could walk behind the tractor. Running into a bystander can result in serious injury or death. (SL-30)



⚠ WARNING

Some tractors are equipped with a "Super Steer" front axle. When a loader is mounted to this type of tractor, the bucket will shift in the opposite direction from which the wheels are turned. Maximum shift will be approximately 8 inches and most noticeable when the tractor is stationary. Sudden or unexpected movement of the loader and attachment could result in serious injury to the operator or bystanders. (SL-33)



⚠ WARNING

Operate the tractor and loader only in conditions where you have clear visibility in daylight or with adequate artificial lighting. Never operate in darkness or foggy conditions where you cannot clearly see at least 100 feet in front and to the sides of the tractor. Make sure you can clearly see bystanders, ditches, steep slopes, drop-offs, overhead obstructions, power lines, and debris or obstruction in the travel path. If you are unable to clearly see these types of items discontinue operating. Contact with unseen vehicles, bystanders, obstructions, or drop-offs can cause serious injury. (SL-35)

SAFETY

DANGER

Be particularly careful in transport. The Implement has raised and moved the center of gravity to the front of the Power Unit increasing the possibility of overturn and tipping forward. Turn curves or go up slopes only at low speed and using a gradual turning angle. Go up slopes with the Implement located uphill. Slow down on rough or uneven surfaces. (SPU-2)

WARNING

Never leave the Implement and Power Unit unattended while the Implement is in the raised position. Accidental operation of a lifting lever or a hydraulic failure may cause the implement to suddenly fall causing serious injury or possible death to anyone who might inadvertently be under the Implement. Lower the implement carefully to the ground. Do not put hands or feet under lifted components. (SPU-3)

DANGER

The center of gravity of a Power Unit equipped with a front-mounted Implement is shifted to the front and removes weight from the rear wheels. The Power Unit should maintain at least 25% total weight with the maximum load in the bucket or attachment on the rear wheels to prevent tipping forward, loss of steering control, and possible injury. Add counterweight if required when operating on slopes and proceed with the load uphill to prevent tipping. Reference the Power Unit's Operator's Manual or an authorized dealer for information on adding additional weight. (SL-37)

WARNING

Make sure the hydraulic quick disconnects are fully seated into the connections. Do not use the loader if the hydraulic connection is leaking. Leaking oil could allow the loader to fall resulting in a serious crushing injury. (SL-22)

WARNING

If the loader valve controls fail to functions properly discontinue use of the tractor and loader until the controls are properly repaired. Sudden or unexpected movement or dropping of the loader and attachment could result in serious injury. (SL-31)

CAUTION

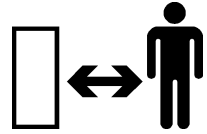
Make sure all air is purged from the hydraulic system before using the loader. Air in the system can cause the loader to respond sluggishly or with unexpected movement. The air can be purged from the cylinder lines by fully cycling the cylinders several times from the fully closed to fully open position. Sudden or unexpected movement or dropping of the loader and attachment could result in serious injury. (SL-32)

SAFETY

Connecting or Disconnecting Implement Safety Instructions and Practices



Do not stand or allow bystander or coworkers between the loader and the tractor while installing or disconnecting the loader from the tractor. Keep hands and body clear of the loader and the loader mounts. Serious injury or death can result from a person being crushed between the tractor and loader. (SL-03)



Never allow anyone to get under the loader or attachment or to reach through the loader lift arms when raised. Serious injury could result from crushing or pinching by the loader or attachment. (SL-06)



Make sure the loader is properly attached to the tractor and the retaining pins securely lock the loader into position. Improper mounting of the loader onto the tractor can result in the loader falling causing serious injury. (SL-23)



Make sure all tractor and loader guards are in place and properly functioning. Do not use an attachment if the roll back guards are damaged or missing. The roll back guards prevents items carried in the attachment from rolling back onto the operator causing serious injury. For added safety when lifting loads above the height of the operator, install a certified Falling Object Protective Structure. (SL-28)

SAFETY

Transporting Safety Instructions and Practices



WARNING Transport only at speeds where you can maintain control of the equipment. Serious accidents and injuries can result from operating this equipment at high speeds. Understand the Tractor and Implement and how it handles before transporting on streets and highways. Make sure the Tractor steering and brakes are in good condition and operate properly.



Before transporting the Tractor and Implement, determine the proper transport speeds for you and the equipment. Make sure you abide by the following rules:

Test the tractor at a slow speed and increase the speed slowly. Apply the Brakes smoothly to determine the stopping characteristics of the Tractor and Implement. As you increase the speed of the Tractor the stopping distance increases. Determine the maximum transport speed not to exceed 20 mph (30 kph) for transporting this equipment.

Test the equipment at a slow speed in turns. Increase the speed through the turn only after you determine that the equipment can be operated at a higher speed. Use extreme care and reduce your speed when turning sharply to prevent the tractor and implement from turning over. Determine the maximum turning speed for you and this equipment before operating on roads or uneven ground.

Only transport the Tractor and Implement at the speeds which allow you to properly control the equipment.



Be aware of the operating conditions. Do not operate the Tractor with weak or faulty brakes or worn tires. When operating down a hill or on wet or rain slick roads, the braking distance increases: use extreme care and reduce your speed. When operating in traffic always use the Tractor's flashing warning lights and reduce your speed. Be aware of traffic around you and watch out for the other guy. (SG-19)



WARNING Before transporting the tractor and Loader engage the loader valve travel lock to prevent inadvertent contact with the joystick controller causing sudden dropping of the loader and attachment. If the loader attachment, such as a bucket, were to drop suddenly and hit the ground while transporting, the tractor could stop immediately resulting in the operator hitting the steering wheel or flying out of the operator's seat. Serious injury could result. (SL-04)



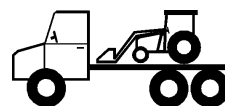
DANGER Do not raise the loader on a hillside. Do not transport across a slope with a raised loader. When the loader is raised, the center of gravity of the tractor and loader is raised increasing the potential for the tractor to tip over. Tractor wheel contact with any wash out, drop off or the ground obstruction with a raised loader could result in the tractor tipping over and causing serious bodily injury. (SL-21)



SAFETY



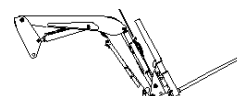
Lower the loader to the bed of the truck or trailer when transporting the tractor and loader with a truck. Measure to ensure the transport height does not exceed the legal limits. Contact with overhead obstructions or power lines can cause property damage or serious injury. (SL-34)



Before dismounting the tractor and loader, lower the loader to the ground or onto solid support blocks. Sudden dropping of the loader and attachment could result in serious injury. (SL-38)



Transport an empty bale spear tilted back in the vertical position to prevent unintended harm to a person, animal or object. Serious injury or death may occur from a bale spear puncture. (SL-39)



Never drive the power unit with the bucket or plow in the raised position. Traveling with the bucket or plow in the raised position increases the chances of colliding with overhead obstructions and making the unit more prone to tipping over. (SNPO-37)

Maintenance and Service Safety Instructions and Practices

READ, UNDERSTAND, and FOLLOW the following Safety Messages. Serious injury or death may occur unless care is taken to follow the warnings and instructions stated in the Safety Messages. Always use good common sense to avoid hazards. (SG-2)



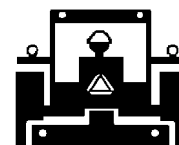
Never interfere with factory-set hydraulic calibrations. Any change in calibration could cause a failure of the equipment and may result in injury. (SBH-13)



Always maintain the safety signs in good readable condition. If the safety signs are missing, damaged, or unreadable, obtain and install replacement safety signs immediately. (SG-5)



Make certain that the "Slow Moving Vehicle" (SMV) sign is installed in such a way as to be clearly visible and legible. When transporting the Equipment use the Tractor flashing warning lights and follow all local traffic regulations. (SG-6)



SAFETY



Do not modify or alter this Implement. Do not permit anyone to modify or alter this Implement, any of its components or any Implement function. (SG-8)



Never work under the Implement, the framework, or any lifted component unless the Implement is securely supported or blocked up to prevent sudden or inadvertent falling which could cause serious injury or even death. (SL-36)



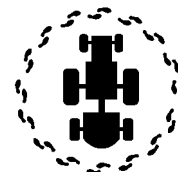
Do not operate this Equipment with hydraulic oil or fuel leaking. Oil and fuel are explosive and their presence could present a hazard. Do not check for leaks with your hand! High-pressure oil streams from breaks in the line could penetrate the skin and cause tissue damage including gangrene. To check for a hose leak, SHUT the unit ENGINE OFF and remove all hydraulic pressure. Wear oil impenetrable gloves, safety glasses and use Cardboard to check for evidence of oil leaks. If you suspect a leak, REMOVE the HOSE and have it tested at a Dealer. If oil does penetrate the skin, have the injury treated immediately by a physician knowledgeable and skilled in this procedure. (SG-15)



Never attempt to lubricate, adjust, or remove material from the Implement while it is in motion or while tractor engine is running. (SG-20)



Periodically inspect all moving parts for wear and replace when necessary with authorized service parts. Look for loose fasteners, worn or broken parts, and leaky or loose fittings. Make sure all pins have cotter pins and washers. Serious injury may occur from not maintaining this machine in good working order. (SG-21)



Do Not fill fuel tank while engine is running. Refuel only after engine has cooled down. If fuel is spilled, move machine away from the area of the spill and avoid creating any source of ignition until the fuel has evaporated. (SBH-49)

SAFETY



Avoid contact with hot surfaces including hydraulic oil tanks, pumps, motors, valves and hose connections. Relieve hydraulic pressure before performing maintenance or repairs. Use gloves and eye protection when servicing hot components. Contact with a hot surface or fluid can cause serious injury from burns or scalding. (SG-34)



Use caution and wear protective gloves when handling sharp objects such as blades, knives, and other cutting edges. Be alert to worn component surfaces which have sharp edges. Sharp surfaces can inflict severe laceration injuries if proper hand protection is not worn. (SG-37)



Avoid contact with hot surfaces of the engine or muffler. Use gloves and eye protection when servicing hot components. Contact with a hot surface or fluid can cause serious injury from burns or scalding. (SG-38)



Never allow anyone to get under the loader or attachment or to reach through the loader lift arms when raised. Serious injury could result from crushing or pinching by the loader or attachment. (SL-06)



PARTS INFORMATION

Rhino products are designed utilizing specifically matched system components to ensure optimum equipment performance. These parts are made and tested to Rhino specifications. Non-genuine "will fit" parts do not consistently meet these specifications. The use of "will fit" parts may reduce equipment performance, void warranties, and present a safety hazard. Use genuine Rhino parts for economy and safety. (SPRM-2)

SEE YOUR RHINO DEALER

SAFETY

Storage and Parking Safety Instructions and Practices



Never crawl under or allow children to play around or on a loader that is disconnected from the tractor. The loader could fall crushing a person resulting in serious injury or death. (SL-13)



Do not remove the attachment from the loader when the loader is disconnected from the tractor. The attachment stabilizes the loader. If the attachment is removed, the loader will fall and could result in serious injury. (SL-26)



Only disconnect and store the loader on firm flat ground. Make sure the loader stands are properly installed and rest on firm ground or support blocks. If the stands sink or fail, the loader could fall causing serious injury. (SL-27)

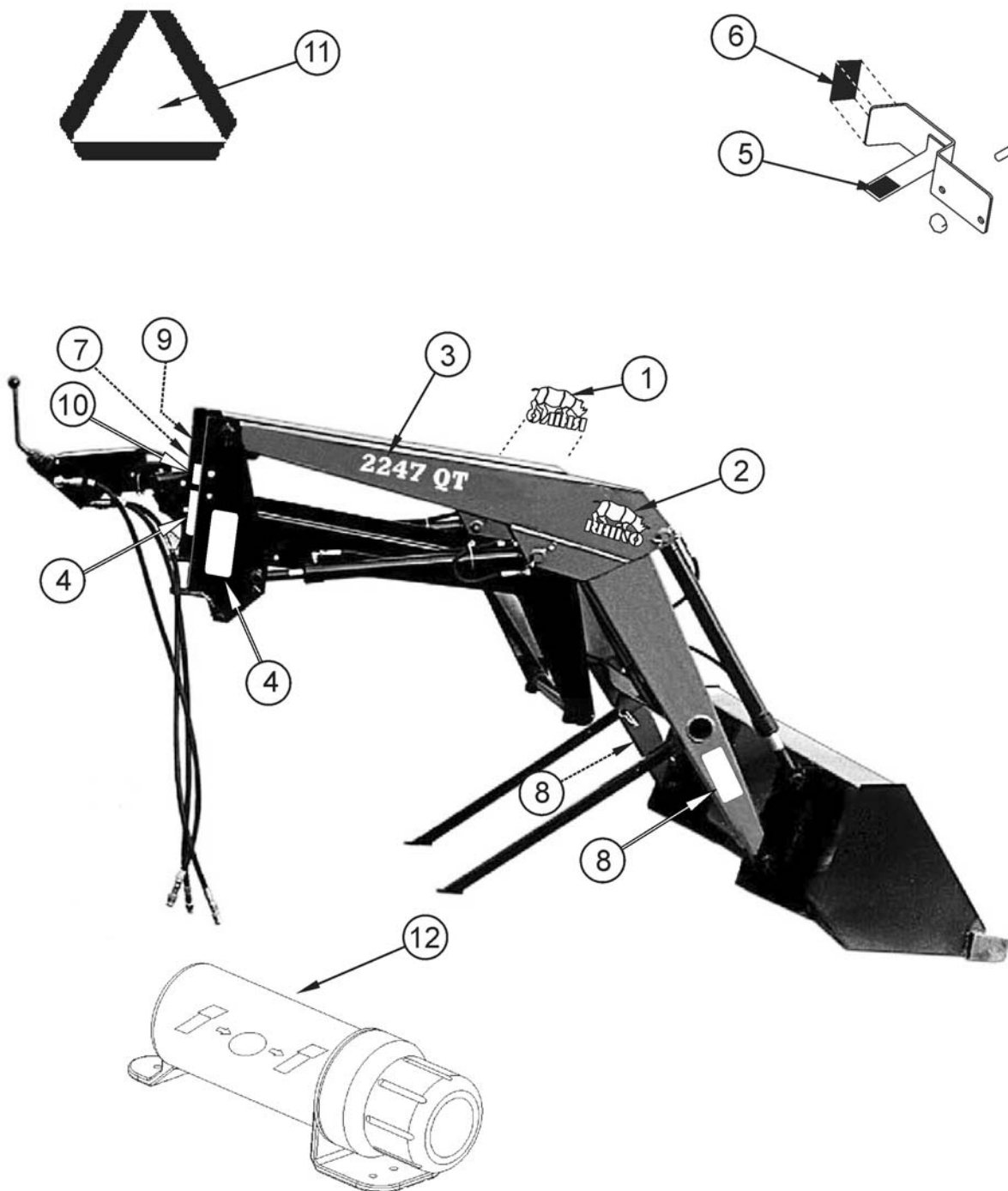
Concluding Safety Instructions and Practices

In addition to the design and configuration of this Implement, including Safety Signs and Safety Equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of the machine. Refer also to Safety Messages and operation instruction in each of the appropriate sections of the Tractor and Equipment Manuals. Pay close attention to the Safety Signs affixed to the Tractor and Equipment. (SG-18)

SAFETY

Decal Location

NOTE: Rhino supplies safety decals on this product to promote safe operation. Damage to the decals may occur while in shipping, use, or reconditioning. Rhino cares about the safety of its customers, operators, and bystanders, and will replace the safety decals on this product in the field, free of charge (Some shipping and handling charges may apply). Contact your Rhino dealer to order replacement decals.



SAFETY

ITEM	PART NO.	QTY	LEVEL	DESCRIPTION
1.	49696	1	LOGO	Rhino, Left
2.	51448	1	LOGO	Rhino, Right
3.		2	MODEL	1847 QT
		2	MODEL	2247 QT
4.	52740	2	WARNING	Oil Leaks
5.	52203	1	WARNING	Lock Valve in Transport
6.	52204	1	INSTRUCT	Loader Positions
7.	D469	1	WARNING	Loader Safety
8.	D468	2	DANGER	Crushing, Electrocution, Falling Hazard
9.	D471	1	WARNING	Handling Bales
10.	D470	1	DANGER	Use ROPS, Seatbelt, Rear Ballast
11.	03200347	*	REFLCTR	SMV Sign
12.	00776031	1	_____	Canister, Operator's Manual
13.	55580	1	_____	Sheet. Decal; Includes two D516 Decals (Note: For Optional Quick Attach Device Only)

* - Supplied by Tractor Manufacturer. Replace if missing.

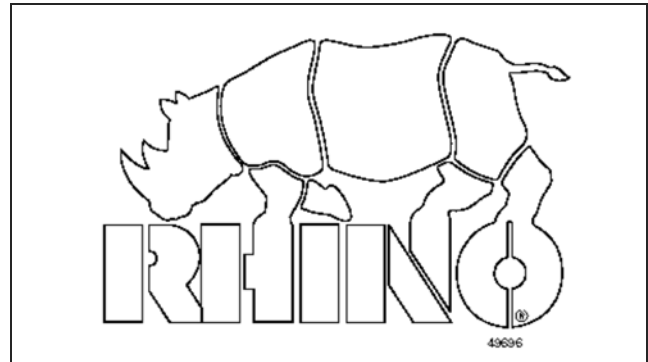
NOTE: Order D438 Safety Decal Sheet which includes all safety decals.

SAFETY

Decal Description

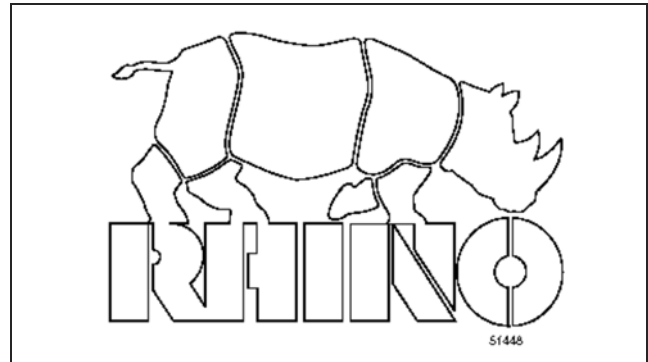
Rhino, Left

P/N 49696

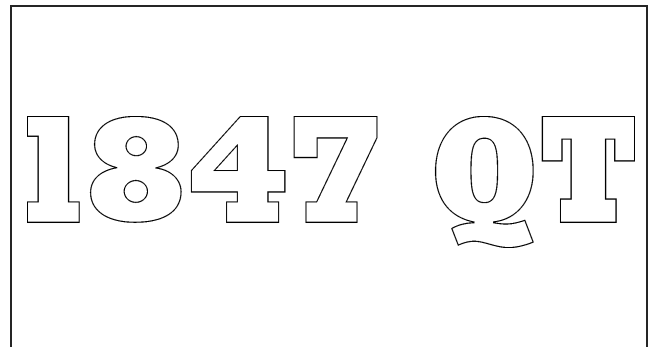


Rhino, Right

P/N 51448



MODEL NAME: 1847 QT



1847 QT Name

MODEL NAME: 2247 QT



2247 QT Name

SAFETY

WARNING! - DO NOT operate with oil leaks.

-Inspect hoses regularly. Failure to inspect and replace worn hoses may allow them to rupture suddenly and violently, resulting in serious bodily injury or death from scalding, fire burn injury, or oil penetration.

-Frayed, torn or crimped hoses may rupture and spray hot oil on operator causing serious injury. Oil may spray on hot tractor parts and catch fire resulting in severe injury, burn or death.

-To check for hose leak, shut tractor off and remove hydraulic pressure. Never use hands to check for leaks.

-Wear safety glasses, oil, impenetrable gloves, and use cardboard to check for evidence of oil leaks. If you suspect a leak, remove the hose and have it tested at a dealer.

KEEP SHIELDS IN PLACE OVER HYDRAULIC COMPONENTS. Do not operate equipment if shields are missing or if oil leaks exist.

-Repair or replace hoses as needed to prevent unexpected failure and possible serious injury to operator or bystander. If oil penetrates skin, serious injury or gangrene could occur. A doctor familiar with this type of injury must surgically remove the injected fluid immediately.

P/N 52740



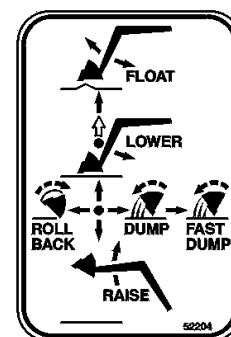
WARNING! Lock valve when in transport or storage.

P/N 52203



Loader Positions.

P/N 52204



SAFETY

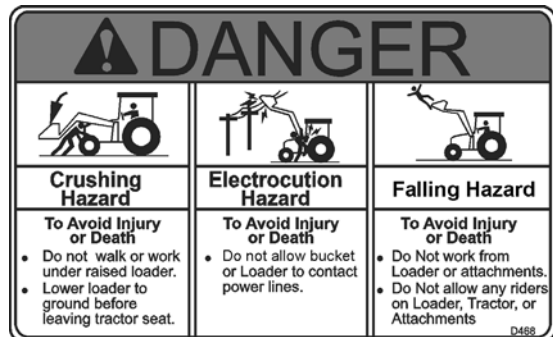
Loader Safety

- Read, understand and follow the operation, warning, and safety instructions in the Operator's Manual.
- Equip tractor with ROPS (Roll Over Protection System) before installing or operating the loader.
- Operate Loader only from operator's seat with the seatbelt securely fastened around you.
- Carry bucket low during transport for better visibility and to avoid overturns.
- Keep bystanders 10 feet away when operating loader.
- When parking or servicing unit, lower bucket to the ground on level hard surface, stop engine, set parking brake, place transmission in park.
- Read and understand mounting instructions in the operator's manual before installing or detaching loader.
- Do not remove bucket or attachment form detached loader.
- Do not allow riders on tractor or loader.
- Do not allow children or untrained persons to operate loader.



D469

Crushing Hazard, Electrocutation Hazard, Falling Hazard.



D468

Crushing Hazard



D471

SAFETY

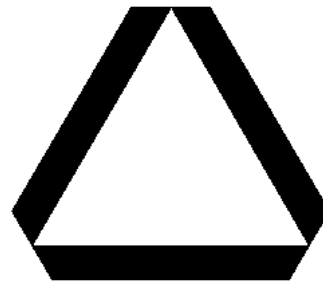
DANGER! - Use ROPS and seatbelt at all times. Add recommended rear ballast. Operate tractor at low speeds. Failure to comply may result in serious injury or death.

D470



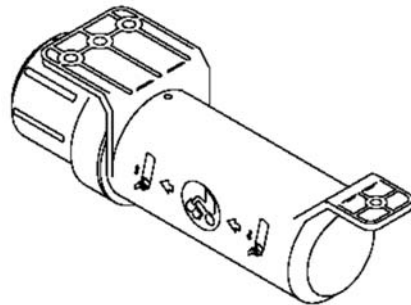
Slow Moving Vehicle Decal. Keep SMV reflector clean and visible. DO NOT transport or operate without the SMV.

P/N 03200347



Read Operator's Manual! The operator's manual is located inside this canister. If the manual is missing order one from your dealer.

P/N 00776031



SAFETY

WARNING! - Crushing Hazard.

-To Avoid Serious Injury or Death

Make sure attachment is securely attached to the loader.
See Operator's Manual for instructions.

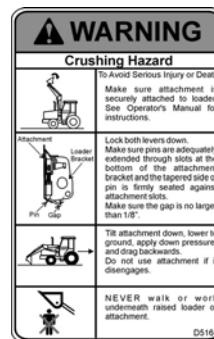
-Lock both levers down. Make sure pins are adequately extended through slots at the bottom of the attachment bracket and the tapered side of pin is firmly seated against attachment slots. Make sure the gap is not larger than 1/8".

-Tilt attachment down, lower to ground, apply down pressure, and drag backwards. Do not use attachment if it disengages.

-NEVER walk or work underneath raised loader or attachment

(Located on the Quick Attach Device Only)

P/N D516



SAFETY

Federal Laws and Regulations

This section is intended to explain in broad terms the concept and effect of federal laws and regulations concerning employer and employee equipment operators. This section is not intended as a legal interpretation of the law and should not be considered as such.

Employer-Employee Operator Regulations

U.S. Public Law 91-596 (The Williams-Steiger Occupational and Health Act of 1970) OSHA

This Act Seeks:

“...to assure so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources...”

DUTIES

Sec. 5 (a) Each employer-

- (1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;
- (2) shall comply with occupational safety and health standards promulgated under this Act.
- (b) Each employee shall comply with occupational safety and health standards and all rules, regulations and orders issued pursuant to this Act which are applicable to his own actions and conduct.

OSHA Training Requirements

Title 29, Code of Federal Regulations Part 1928.57(a)(6). www.osha.gov

Operator instructions. At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee who operates an agricultural tractor and implements in the safe operating practices and servicing of equipment with which they are or will be involved, and of any other practices dictated by the work environment.

Keep all guards in place when the machine is in operation;

Permit no riders on equipment

Stop engine, disconnect the power source, and wait for all machine movement to stop before servicing, adjusting, cleaning or unclogging the equipment, except where the machine must be running to be properly serviced or maintained, in which case the employer shall instruct employees as to all steps and procedures which are necessary to safely service or maintain the equipment.

Make sure everyone is clear of machinery before starting the engine, engaging power, or operating the machine.

Employer Responsibilities:

To ensure employee safety during Tractor and Implement operation, it is the employer's responsibility to:

1. Train the employee in the proper and safe operation of the Tractor and Implement.
2. Require that the employee read and fully understand the Tractor and Implement Operator's manual.
3. Permit only qualified and properly trained employees to operate the Tractor and Implement.
4. Maintain the Tractor and Implement in a safe operational condition and maintain all shields and guards on the equipment.
5. Ensure the Tractor is equipped with a functional ROPS and seat belt and require that the employee operator securely fasten the safety belt and operate with the ROPS in the raised position at all times.
6. Forbid the employee operator to carry additional riders on the Tractor or Implement.
7. Provide the required tools to maintain the Tractor and Implement in a good safe working condition and provide the necessary support devices to secure the equipment safely while performing repairs and service.
8. Require that the employee operator stop operation if bystanders or passersby come within 300 feet.

Child Labor Under 16 Years of Age

Some regulations specify that no one under the age of 16 may operate power machinery. It is your responsibility to know what these regulations are in your own area or situation. (Refer to U.S. Dept. of Labor, Employment Standard Administration, Wage & Home Division, Child Labor Bulletin #102.)

SECTION I

INTRODUCTION AND DESCRIPTION

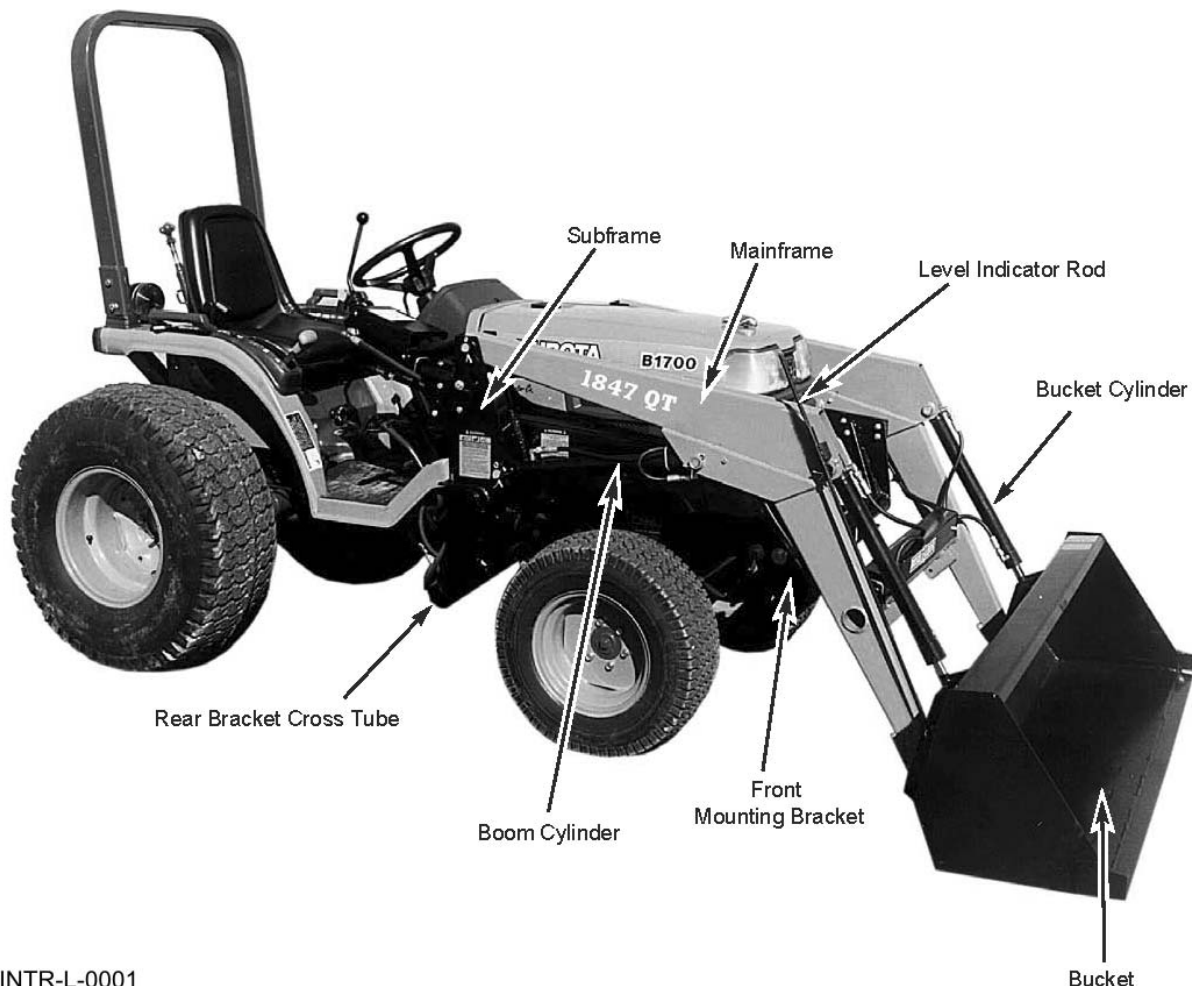
1-1 INTRODUCTION

We are pleased to have you as a Rhino customer. Your front end Loader has been carefully designed to give maximum service with minimum down time. This manual is provided to give you the necessary operating and maintenance instructions for keeping your loader in top operating condition. Please read this manual thoroughly. Understand what each control is for and how to use it. Observe all safety precautions decaled on the machine and noted throughout the manual for safe operation of the implement. If any assistance or additional information is needed, contact your authorized Rhino dealer.

1-2 DESCRIPTION

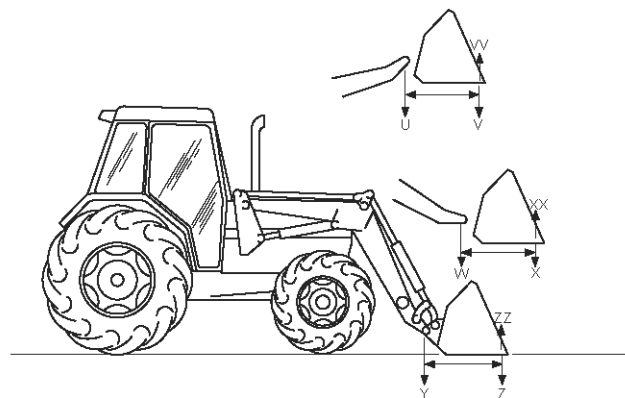
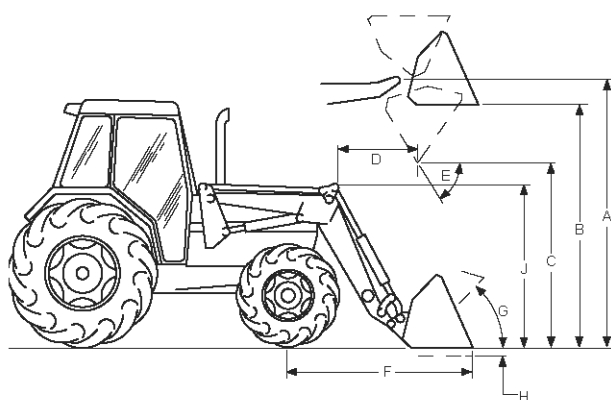
The Model 1847 and 2247 Front End Loaders are designed for two-wheeled drive and four-wheel drive tractors. They are intended to lift only loose materials that will fit in the bucket. All cylinders are double-acting. A bucket level indicator allows operator to gauge bucket position even when bucket cannot be seen. Parking stands support loader so tractor can be "driven in" for quick attaching. Major components of loader are shown in Figure 1-1. Technical specifications are given in Table 1-1.

Figure 1-1 Major Components



INTR-L-0001

Table 1-1 TECHNICAL SPECIFICATIONS



SERIES LOADER	1847QT	2247QT
A. Maximum Lift Height - Measured at Pivot Pin	76 in.	97 in.
B. Maximum Lift Height - Under Level Bucket	71 in.	90 in.
C. Clearance with Attachment Dumped 45°	59 in.	77 in.
D. Reach at Maximum Height	22 in.	25 in.
E. Maximum Dump Angle	50°	50°
F. Reach with Bucket on Ground	44 in.	58 in.
G. Maximum Rollback Angle	22°	22°
H. Digging Depth	2.5 in.	4 in.
J. Overall Height in Carry Position	44 in.	54 in.
U. Lift Capacity to Maximum Height - At Pivot Pin	725 lbs.	1150 lbs.
V. Lift Capacity to Maximum Height - 19.5" Forward of Pivot Pin	515 lbs.	875 lbs.
W. Lift Capacity to 59" Height - At Pivot Pin	800 lbs.	1365 lbs.
X. Lift Capacity to 59" Height - 19.5" Forward of Pivot Pin	595 lbs.	1085 lbs.
Y. Breakout Force - At Pivot Pin	1340 lbs.	1995 lbs.
Z. Breakout Force - 19.5" Forward of Pivot Pin	960 lbs.	1525 lbs.
VV. Rollback Force at Maximum Height - 19.5" Forward of Pivot Pin	1155 lbs.	2040 lbs.
XX. Rollback Force at 59" Height - 19.5" Forward of Pivot Pin	1330 lbs.	2410 lbs.
ZZ. Rollback Force at Ground Level - 19.5" Forward of Pivot Pin	1055 lbs.	1820 lbs.
Raising Time - Ground Level to Full Height	3.5 sec.	4 sec.
Lowering Time - Full Height to Ground	2 sec.	2 sec.
Bucket Dumping Time - Full Rollback to Full Dump	3.5 sec.	4 sec.
Bucket Rollback Time - Full Dump to Full Rollback	2 sec.	2 sec.
Tractor HP Range	12 - 25 2 & 4 WD	15 - 35 2 & 4 WD
Specifications Based On Tractor System of	1875 psi hyd. pressure & 4 gpm pump cap.	2000 psi hyd. pressure & 6 gpm pump cap.

SECTION II PREPARATION FOR USE

2-1 ATTACHING TO TRACTOR

⚠ WARNING

WEIGHT SHOULD BE APPLIED TO TRACTOR REAR WHEELS AND/OR 3-POINT HITCH TO INCREASE STABILITY.

⚠ WARNING

TO AVOID INJURY OR DEATH: ALWAYS CONNECT LOADER HOSES TO APPROPRIATE TRACTOR AUXILIARY OUTLET. ALWAYS REMOVE OR LOCKOUT TRACTOR'S HYDRAULIC VALVES DETENT POSITIONS FOR LEVER NEUTRAL RETURN WHEN RELEASED.

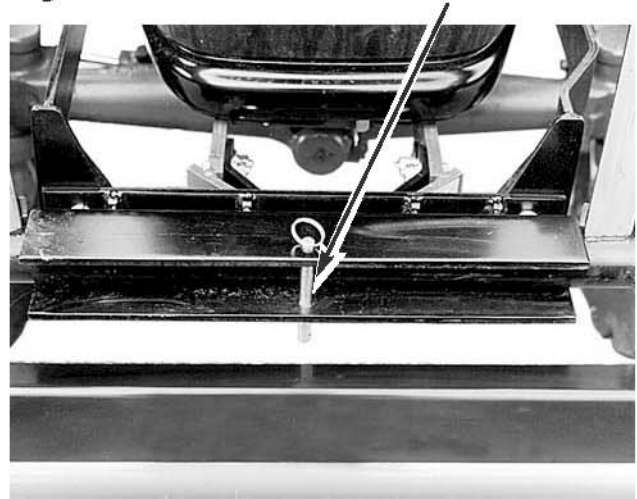
It is recommended that tractor wheels be moved to the widest setting and rear ballast be applied to increase tractor stability. Three point hitch mounted weights are available from your Rhino dealer. Air pressure in front tires should be adequate for heavy loads. Refer to tractor owner's manual for further instructions. Attach loader to tractor as follows:

- A. Slowly drive tractor onto loader (Figure 2-1)
- B. Connect hydraulic hoses to tractor auxiliary outlets.
- C. Carefully extend or retract boom cylinders

Figure 2-1 Drive Tractor Into Loader



Figure 2-2 Cross Tube Pinned Into Bracket



to align cross tube with front mounting brackets.

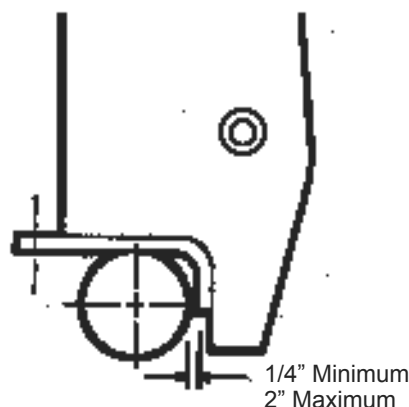
- D. Drive tractor forward to seat cross tube in front bracket. Install pin on bracket to retain cross tube. (Figure 2-2)

⚠ WARNING

USE CAUTION WHEN MOUNTING LOADERS EQUIPPED WITH OPTIONAL CONTROL VALVE ON TRACTORS EQUIPPED WITH CANOPY. RAISING LOADER SUBFRAME TOO HIGH CAN PINCH HAND BETWEEN CONTROL HANDLE AND CANOPY CAUSING INJURY.

E. Lower loader rear subframe by extending bucket cylinders (dump) allowing it to seat on rear brackets. There must be equal space between loader frame and rear bracket (Figure 2-3) on each side.

Figure 2-3



F. Install cuff to secure loader subframe to bracket. Torque nut to 60 - 70 ft./lbs. (Figure 2-4)

G. Raise boom high enough to remove parking stands and store as shown in Figure 2-5.

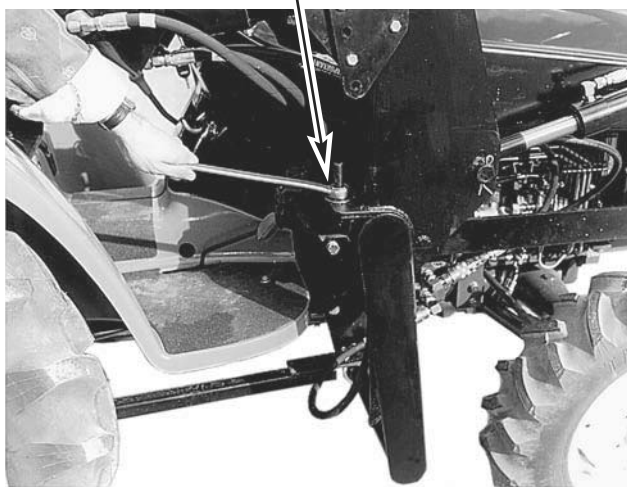
⚠ WARNING

DO NOT STAND UNDER LOADER WHILE REMOVING/INSTALLING PARKING STANDS.

H. Secure hydraulic hoses to tractor to prevent interference. It is recommended that hoses be run under tractor operator's platform.

I. Extend and retract both sets of cylinders beginning with short strokes. Gradually increase the length of stroke until cylinders "bottom out" in each

Figure 2-4 Tightening Nut On Cuff (60 - 70 ft./lbs.)



direction. Hold valve open with cylinders "bottomed out" for 3-5 seconds. This will purge air from hydraulic components.

NOTE

When valve is held open, a squealing noise will be heard when cylinders "bottom out" and hydraulic oil passes through the relief valve. This may cause overheating if valve is held open longer than 5 seconds.

Make certain valve operates as shown on decal on top of valve shield. If valve operation is incorrect, see Figure 5-2 for correct valve connection.

CAUTION

AIR IN HYDRAULIC COMPONENTS WILL CAUSE ERRATIC LOADER OPERATION. PURGE AIR FROM SYSTEM AS DESCRIBED ABOVE BEFORE WORKING WITH LOADER. FAILURE TO DO SO CAN RESULT IN PERSONAL INJURY AND EQUIPMENT DAMAGE.

J. Check hydraulic oil level in tractor hydraulic reservoir. Refer to tractor operator's manual.

Figure 2-5 Parking Stand In Stored Position



SECTION III OPERATING INSTRUCTIONS



CAUTION

DO NOT LIFT ROUND BALES. ROUND BALES CAN ROLL DOWN LOADER ARMS CAUSING SERIOUS INJURY OR DEATH TO OPERATOR.

3-1 GENERAL SAFETY

Only qualified people familiar with this manual should operate this machine. Operator should wear hard hat, safety glasses and safety shoes. The operator should read, understand and practice all safety messages shown on the caution, warning and danger decals affixed to the loader to avoid serious injury or death.

It is recommended that tractor be equipped with Rollover Protective System (ROPS) and a seat belt be used. Check for ditches, stumps, holes or other obstacles that could upset tractor or damage loader. Fluid and/or weights for rear tires is recommended for added stability. See tractor operator's manual. Three point hitch mounted weights are available from your Rhino dealer. Always turn off tractor engine, set parking brake and lower loader to ground before dismounting tractor. See page 4 for additional safety precautions.

3-2 OPTIONAL BUCKET LEVEL GAUGE ROD

An optional level indicator gauge rod (Figure 3-1) can be used to determine bucket angle. Before beginning work, observe the position of the gauge rod with bucket flat on the ground. Raise boom to several different positions. At each position, level bucket then observe gauge rod. Once familiar with the gauge rod positions, operation of loader will be easier and more efficient.

Figure 3-1
Level Indicator Rod



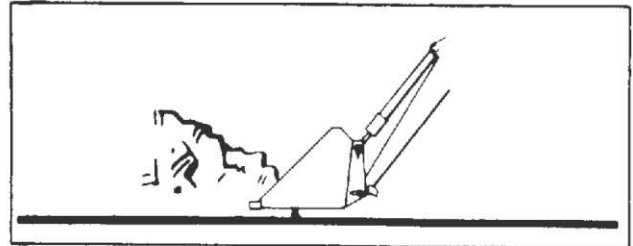
3-3 OPERATION

The loader should be operated with the tractor engine running at 1200-1700 rpm. Excessive speeds are dangerous and may cause bucket spillage and unnecessary strain on both the tractor and loader.

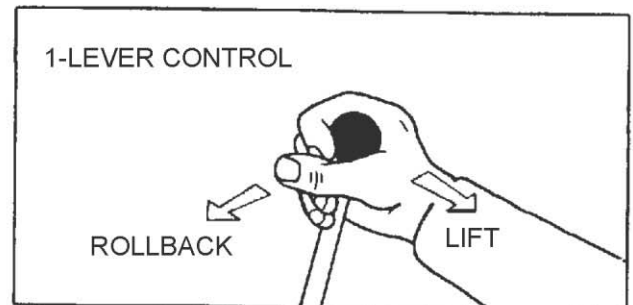
The following text and illustrations offer suggested loader and tractor operating techniques.

FILLING THE BUCKET

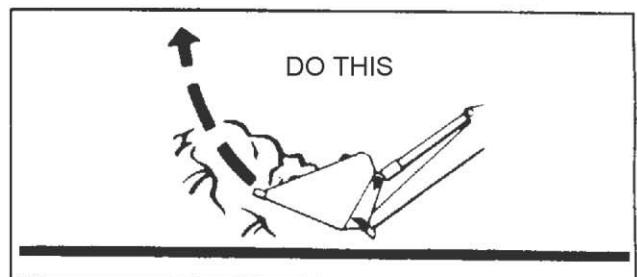
Approach and enter the pile with a level bucket.



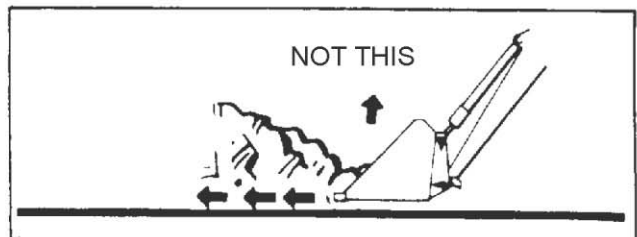
Ease lever back and toward you to lift and rollback the bucket.



The lift and rollback of the bucket will increase efficiency because...



... a level bucket throughout the lifting cycle resists bucket lift and increases breakaway effort.



NOTE: Do not be concerned if the bucket is not completely filled during each pass. Maximum productivity is determined by the amount of material loaded in a given period of time. Time is lost if two or more attempts are made to fill the bucket on each pass.

LIFTING THE LOAD

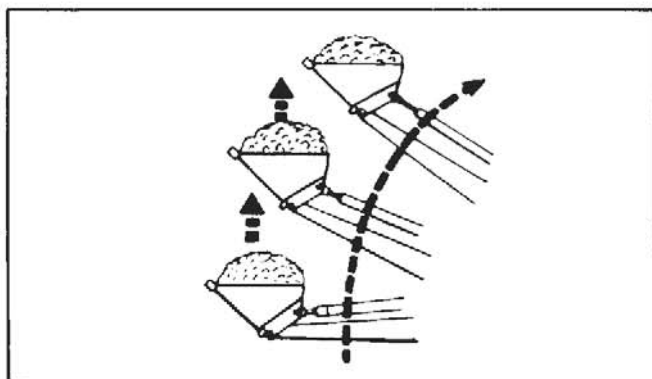
WARNING

DO NOT LIFT OR CARRY ANYONE IN THE BUCKET OR ON ANY OTHER POSITION OF THE LOADER OR LOADER ATTACHMENT. INADVERTENT MOVEMENT OF THE LOADER OR ATTACHMENT COULD RESULT IN SERIOUS INJURY OR DEATH FROM FALLING OR CRUSHING.

CAUTION

MAKE SURE MATERIAL IN BUCKET CANNOT ROLL OUT AND DOWN ON TRACTOR WHEN BUCKET IS RAISED TO FULL HEIGHT. KEEP CLEAR OF OVERHEAD OBSTRUCTIONS SUCH AS TREES, LIMBS OR POWER LINES WHEN RAISING THE BUCKET.

When lifting the load, keep the bucket positioned to avoid spillage.

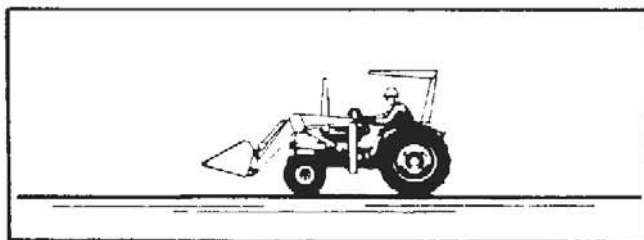


CAUTION

DO NOT ATTEMPT TO LIFT BUCKET LOADS IN EXCESS OF 625 LBS. FOR THE 1847 OR 1000 LBS. FOR THE 2247.

CARRYING THE LOAD

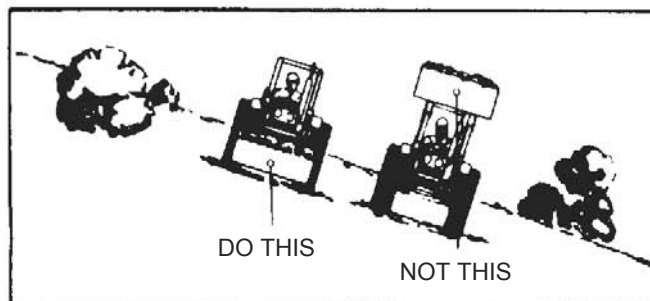
Position the bucket just below the level of the tractor hood for maximum stability and visibility, whether the bucket is loaded or empty.



Use extreme caution when operating the loader on a slope, keep the bucket as low as possible, this keeps the bucket and tractor center of gravity low and will provide maximum tractor stability.

CAUTION

OPERATING THE LOADER ON A HILLSIDE IS DANGEROUS. EXTREME CARE IS RECOMMENDED.

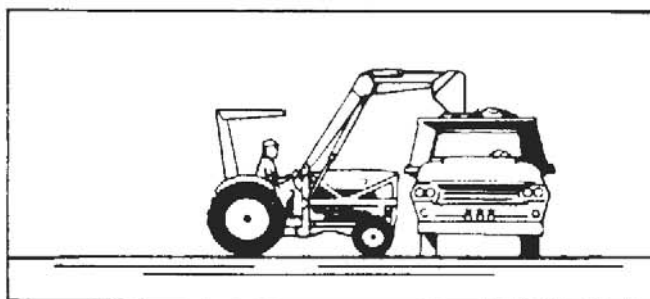


When transporting the load, keep the bucket as low as possible to avoid tipping, in case a wheel drops in a rut.



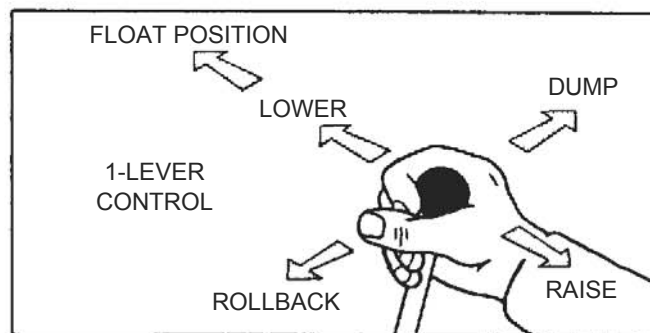
DUMPING THE BUCKET

Lift the bucket high enough to clear the side of the vehicle. Move the tractor in as close to the side of the vehicle as possible, then dump the bucket.



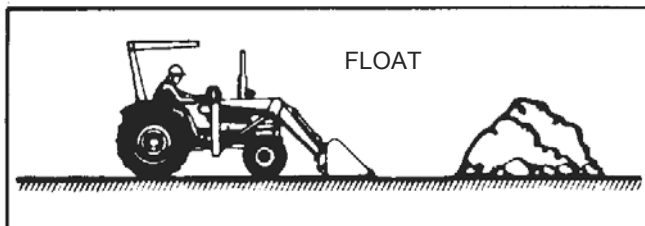
LOWERING THE BUCKET

After the bucket is dumped, back away from the vehicle while lowering and rolling back the bucket.

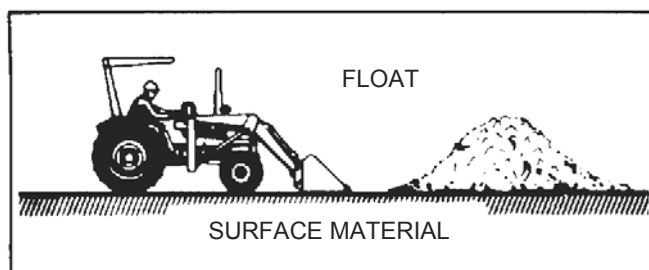


OPERATING WITH FLOAT CONTROL

During hard surface operation, keep the bucket level and put the lift control in the float position to permit the bucket to float on the working surface. If hydraulic down pressure is exerted on the bucket, it will wear faster than normal.

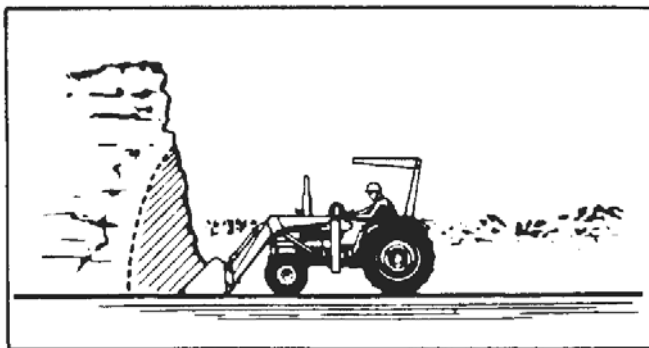


The float will also prevent the mixing of surface material with stockpile material. The float position will reduce the chance of surface gouging when removing snow or other material.

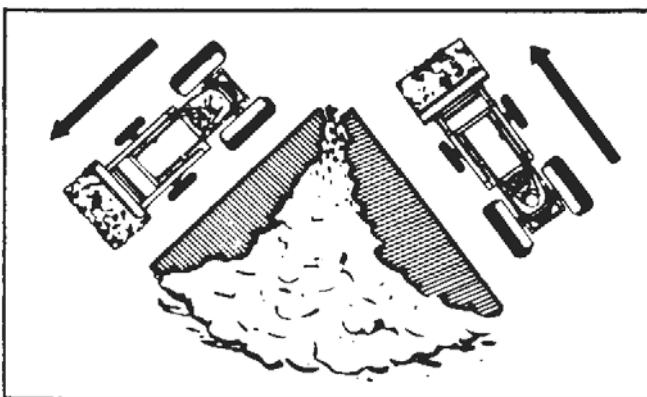


LOADING FROM A BANK

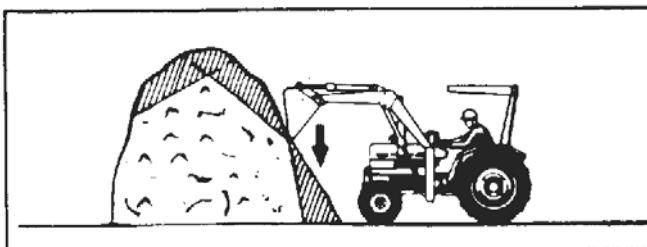
Choose a forward gear that provides sufficient ground speed for loading.



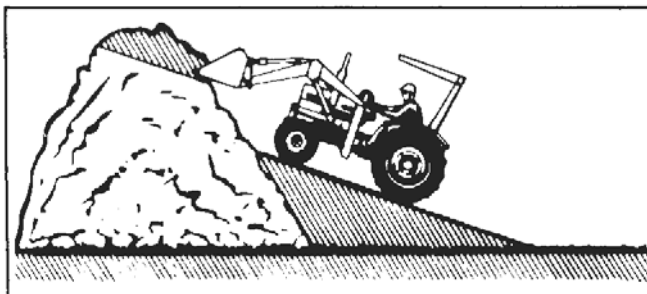
Exercise caution when undercutting high banks. Dirt slides can be dangerous. Load from as low as possible for maximum efficiency. Loader lift and breakaway capacity diminish as loading height is increased.



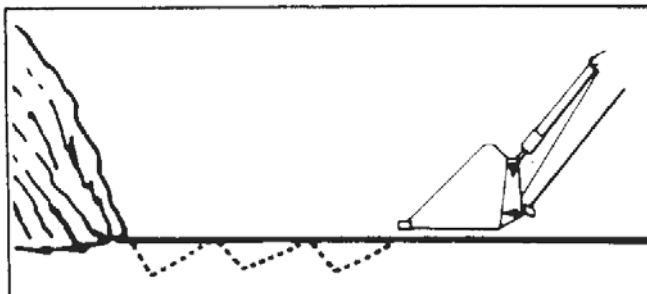
Sidecutting is a good technique for cutting down a big pile.



If the pile sides are too high and liable to cause cave-in, use the loader to break down the sides until a slot can be cut over the top.

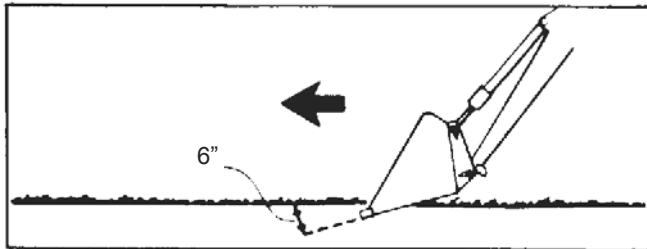


Another method for large dirt piles is to build a ramp approach to the pile.

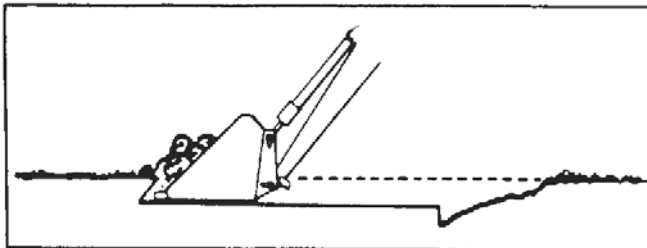


It is important to keep the bucket level when approaching a bank or pile. This will help prevent gouging the work area.

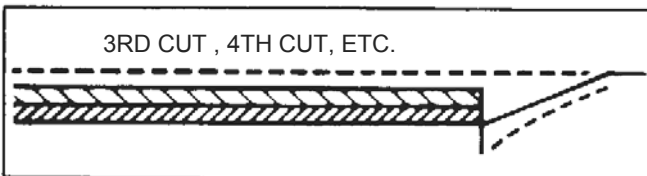
PEELING AND SCRAPING



Use a slight bucket angle, travel forward, and hold the lift control forward to start the cut. Make a short, angle cut approximately 6" deep and break out cleanly.

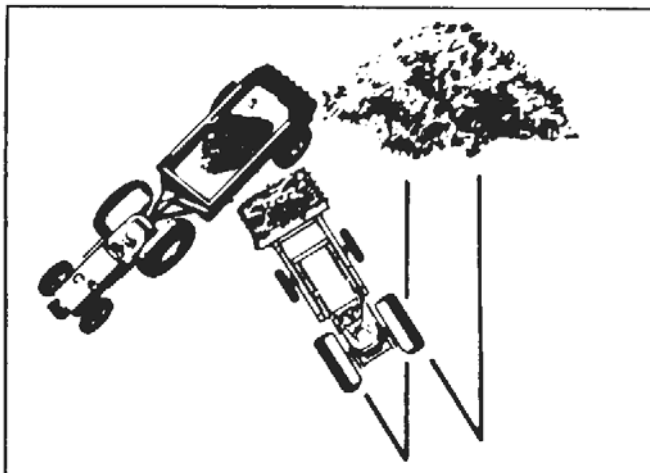


With the bucket level, start a cut at the notch approximately 2" deep. Hold the depth by feathering the bucket control to adjust the cutting lip up or down. When the front tires enter the notch, adjust the lift cylinder to maintain proper depth.



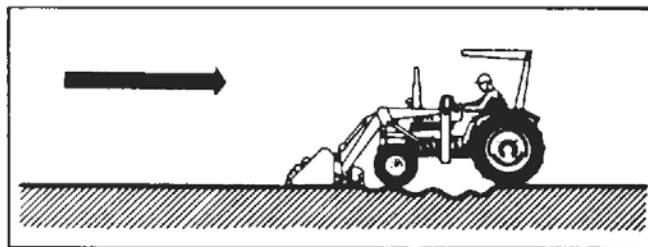
Make additional passes until the desired depth is reached. During each pass, only use the bucket control while at working depth. This will allow you to concentrate on controlling the bucket angle to maintain a precise cut.

LOADING LOW TRUCKS OR SPREADERS FROM A PILE



For faster loading, minimize the angle of turn and length of run between pile and spreader.

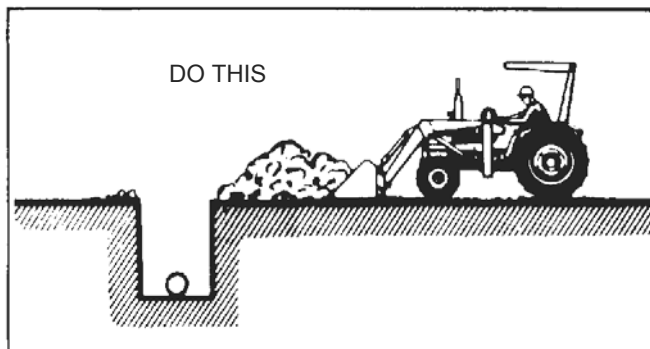
BACKFILLING



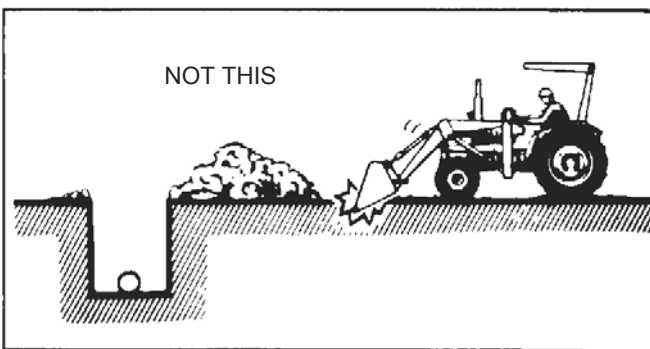
Backgrade occasionally with a loaded bucket to keep the working surface free of ruts and holes. Hold the lift control forward in **FLOAT POSITION** so **the full weight** of the bucket is scraping the ground. Use only the heel of the bucket while backgrading.

IMPORTANT: To prevent damage to cylinders:

- (1) Do not backgrade with bucket cylinders extended.
- (2) Always backgrade with valve in **float position**.

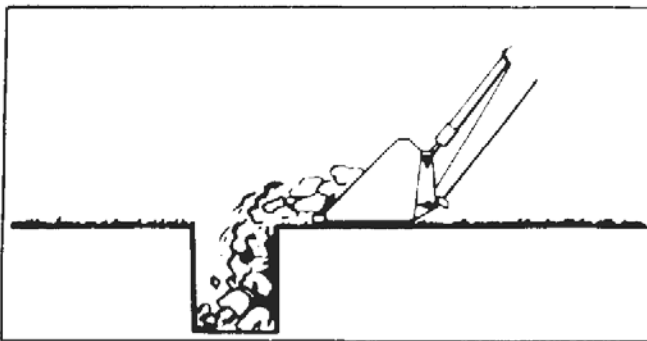


Approach the pile with a flat bucket.

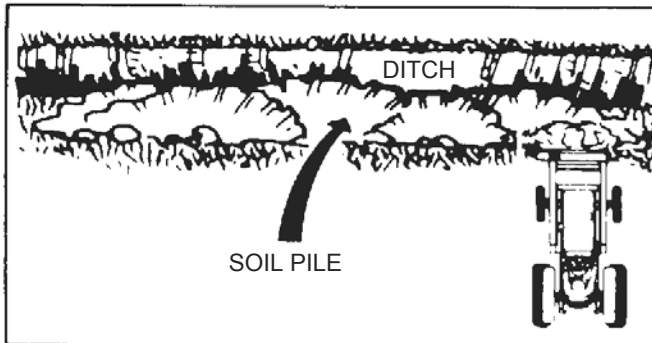


Poor methods actually move no more dirt and make it more difficult to hold a level grade.

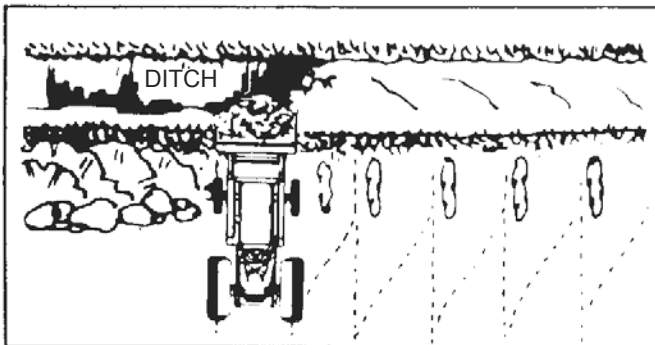
Do not use the bucket in the dumped position for bulldozing or backgrading. This method, shown above, will impose severe shock loadings on the dump linkage, the bucket cylinder, and the tractor.



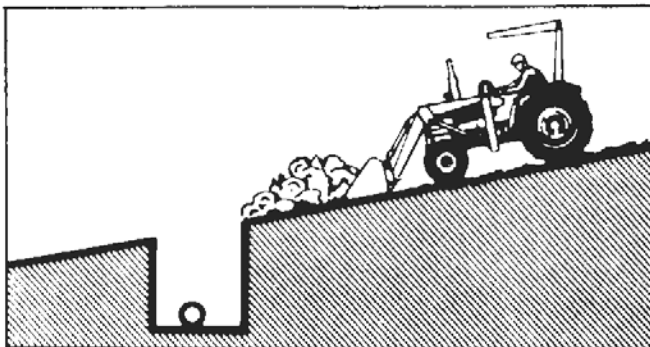
Leave dirt in the bucket because dumping on each pass wastes time.



Operate at right angles to the ditch. Take as big a bite as the tractor can handle without lugging down.



Leave dirt which drifts over the side of the bucket for final clean-up.



Pile dirt on the high side for easier backfilling on a slope.

HANDLING LARGE HEAVY OBJECTS

⚠ WARNING

Do not use front end loaders for handling large, heavy objects such as large, round or rectangular bales, logs and oil drums. Handling large heavy objects can be extremely dangerous due to:

- Possibility of rolling the tractor over.
- Possibility of upending the tractor.
- Possibility of the object rolling or sliding down the loader arms onto the operator.

3-4 TRANSPORTING

When transporting on road or highway, day or night, use tractor flashing warning lights unless prohibited by law. Carry load as low as possible maintaining adequate ground clearance and visibility. Reduce tractor ground speed when transporting a load. Take extra care when traveling over rough terrain or on slopes.

⚠ CAUTION

WHEN TRANSPORTING THE LOAD, KEEP THE BUCKET AS LOW AS POSSIBLE TO RESIST TIPPING, IN CASE A WHEEL DROPS IN A RUT. THIS WILL AVOID TIPPING AND POSSIBLE INJURY.

3-5 LOADER DETACHING AND STORAGE NOTE

When loader hydraulics are disconnected from tractor the tractor hydraulic circuit must be completed. Failure to do so will result in tractor hydraulic pump damage.

A. Remove parking stands from storage. Raise boom and install as shown in Figure 2-1.

⚠ WARNING

NEVER STAND UNDER LOADER WHILE INSTALLING/REMOVING PARKING STANDS.

- Lower boom until parking stands contact ground.
- Extend bucket cylinders (dump) until cutting edge of bucket is firmly on the ground.
- Remove pin from front mounting bracket.
- Remove nuts and clamps securing loader subframe to rear mounting bracket. (Figure 2-4)
- With tractor at IDLE SPEED carefully roll bucket back until subframe raises off rear bracket.
- Carefully activate boom cylinders until cross tube is free of pressure within front bracket channel.
- Disconnect hydraulic hoses.
- Carefully back tractor out of loader.
- Pin clamps back to subframe and place pin back in front mounting bracket for storage.
- Clean dirt and debris from loader. Dirt will hold moisture and cause rust.
- If loader is to be stored for an extended period of time, perform lubrication per paragraph 4-2 Also apply a coat of heavy grease to exposed cylinder rods to prevent rusting.

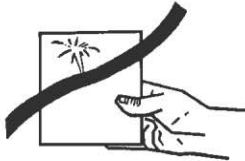
SECTION IV MAINTENANCE

4-1 MAINTENANCE CHECK LIST

Perform scheduled maintenance as outlined below. Lower machine to ground, turn off tractor and set parking brake before doing maintenance inspections or work. All bolts should be torqued as recommended in torque chart on inside of back cover unless otherwise indicated.

CAUTION

USE A PIECE OF CARDBOARD OR WOOD RATHER THAN HANDS AND WEAR EYE PROTECTION WHEN SEARCHING FOR HYDRAULIC LEAKS. ESCAPING HYDRAULIC OIL UNDER PRESSURE CAN PENETRATE SKIN. IF OIL IS INJECTED INTO SKIN, IT MUST BE SURGICALLY REMOVED WITHIN A FEW HOURS BY A DOCTOR OR GANGRENE MAY RESULT.



WARNING

THE LOADER CAN FALL FROM HYDRAULIC SYSTEM FAILURE. TO AVOID SERIOUS INJURY OR DEATH, SECURELY SUPPORT LOADER BEFORE WORKING UNDERNEATH.

BEFORE EACH USE

1. Inspect hydraulic lines and fittings for wear or leaks. Repair or replace if needed.
2. Inspect all pivot pins for wear. Make certain cotterpins are installed to retain each pivot pin.
3. Check all bolts for tightness.
4. Perform BEFORE EACH USE lubrication per paragraph 4-2.
5. During operation, listen for abnormal sounds which might indicate loose parts or other damage.

AFTER EACH USE

1. Clean all debris from machine.

4-2 LUBRICATION (Figure 4-1)

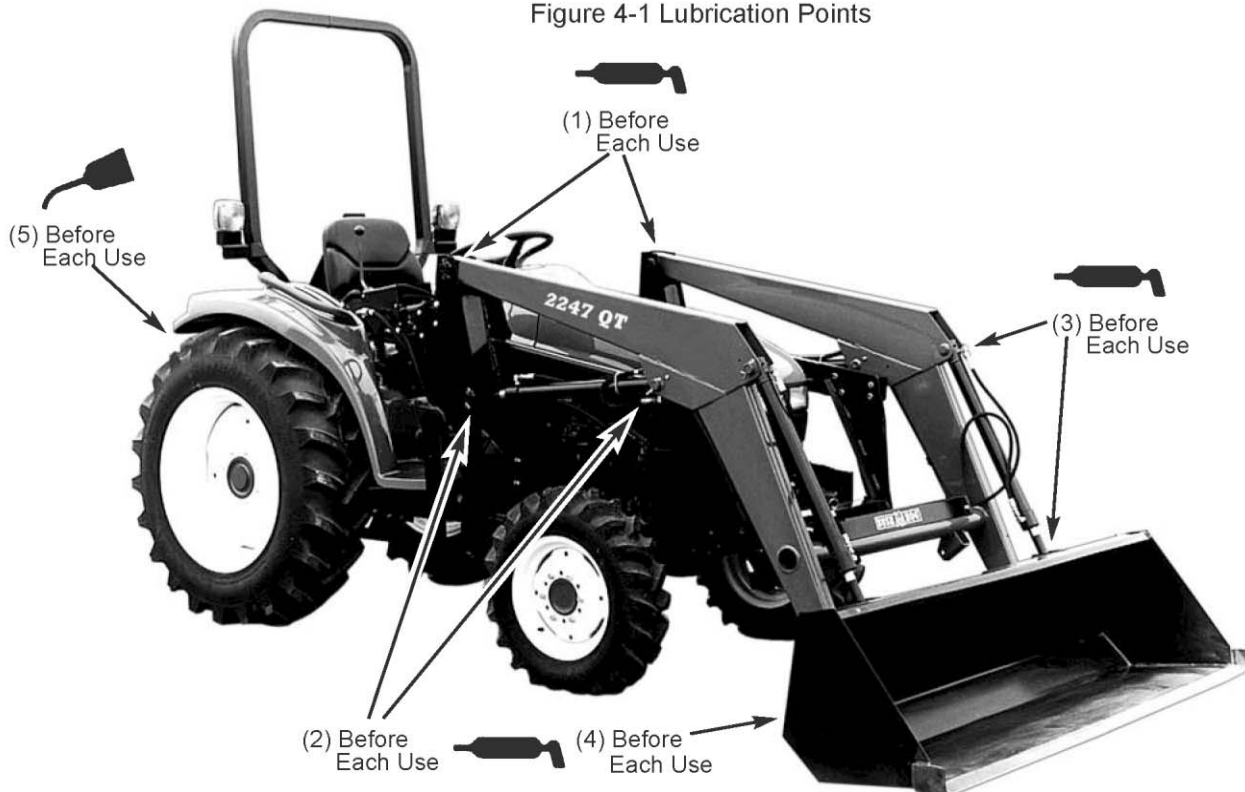
NOTE

The multipurpose grease referenced in this section is an NLGI Grade 2 type grease.

BEFORE EACH USE

1. Boom Pivot Pins- Apply multi-purpose grease to each fitting (1 fitting each side)
2. Boom Cylinders- Apply multi-purpose grease to each fitting (2 fittings each cylinder)
3. Bucket Cylinders- Apply multi-purpose grease to each fitting (2 fittings each cylinder)
4. Bucket Pivot Pin- Apply multi-purpose grease to each fitting (1 fitting each side)
5. Tractor Hydraulic Oil- Cycle boom and bucket cylinders 2 or 3 times before use then check tractor hydraulic oil level per tractor operator's manual.

Figure 4-1 Lubrication Points



4-3 HYDRAULIC SYSTEM PRESSURE REQUIREMENTS

A tractor hydraulic system pressure setting of 1875 psi (1847 QT) or 2000 psi (2247 QT) is recommended for maximum efficiency and service. The Rhino control valve is pre-set at factory and should not be adjusted.

4-4 TROUBLESHOOTING

Troubleshooting procedures are listed in table 4-1. If the problem cannot be solved or replacement parts are necessary, contact your authorized Rhino dealer. Please have ready your machine name, model number, serial number, purchase date, and exact cause or description of problem.

TABLE 4-1

PROBLEM	POSSIBLE CAUSE	REMEDY
1. Loader slow and/or will not dump.	Hydraulic oil too heavy. Oil filter plugged. Hydraulic pump worn. Oil line restricted or leaking. Quick couplers not properly connected. Control valve does not shift properly. Air in hydraulic system. Cylinder leaks internally. Faulty valve.	Change to proper oil. Clean or replace filter. Repair or replace pump. Check all hoses and tubes for leaks, damage or restrictions. Replace damaged or restricted hoses or tube lines. Check connection - Replace if necessary. Inspect, clean, repair or replace valve. Cycle lift cylinders and bucket cylinders several times to free system of air. Replace seals. Replace or repair valve.
2. Loader chatters or vibrates when raising or lowering.	Air leak in pump inlet line. Air in hydraulic system. Oil level too low.	Check, tighten or replace inlet. line. Cycle lift and bucket cylinders. Add oil as required.
3. Pump noisy.	Inlet line restricted or leaking. Oil level too low. Pump worn or damaged.	Check for air leaks restrictions or collapsed hose. Tighten or replace hose. Clean filter if necessary. Add oil as required. Repair or replace pump.
4. Oil leaks.	Defective fittings or hoses. Loose Connections. Worn or damaged O-ring or wiper seal in cylinder rod end. Worn or damaged O-rings in valve.	Replace defective parts. Tighten fittings. Install a seal repair kit. Install an O-ring repair kit.
5. Insufficient lift capacity.	Improper hydraulic pump operation. Load is greater than boom lift capacity. Internal boom cylinder leakage. Improper hydraulic valve operation.	Repair or replace pump. Check loader specifications. Replace any worn parts and install a seal repair kit. Repair or replace valve.
6. Excessive wear on bucket	Bucket is riding on cutting edge instead of wear pads.	Use boom "FLOAT" position or bucket level indicator to ensure bucket rides on wear pads..
7. Slow leakdown.	Worn control valve. Worn cylinder piston seals.	Have authorized Rhino dealer replace seals. Have authorized Rhino dealer replace seals.
8. Hydraulic cylinders inoperative.	Hose from control valve improperly connected.	Refer to plumbing diagrams in Section V
9. Loader lift and bucket tilt controls do work according to decal.	Hoses improperly connected.	Refer to plumbing diagrams in Section V and correct hose connections.

SECTION V ASSEMBLY

CAUTION

THE FOLLOWING SAFETY PRECAUTIONS SHOULD BE THOROUGHLY UNDERSTOOD BEFORE ATTEMPTING MACHINE ASSEMBLY.

1. Do not lift heavy parts or assemblies. Use crane, jack, tackle, fork trucks, or other mechanical devices.
2. Select an area for assembly that is clean and free of any debris which might cause persons working on the assembly to trip.
3. Arrange parts to be assembled neatly in the work area and have tools and other mechanical assisting devices in easy reach.
4. Inspect all parts and assemblies thoroughly and remove any sharp edges, grease, oil, or dirt which might cause pieces to slip when handling.
5. Preview the assembly instructions in your operator's manual before proceeding further.
6. If the assembly instructions call for parts or assemblies to be blocked up, use only blocking material that is in good condition and is capable of handling the weight of the assembly to be blocked. Also, insure that the blocking material is on a clean, dry surface.
7. Never put hands or any other body under blocked up assemblies if at all possible.
8. Always wear goggles or safety glasses when hammering, grinding or drilling metal parts.
9. If the assembly calls for welding or cutting, be sure that there are no flammable materials close at hand and that bystanders have taken necessary precautions.

AFTER COMPLETING ANY ASSEMBLY STEP, THOROUGHLY READ THE NEXT STEP IN THE ASSEMBLY INSTRUCTIONS BEFORE PROCEEDING WITH THAT STEP.

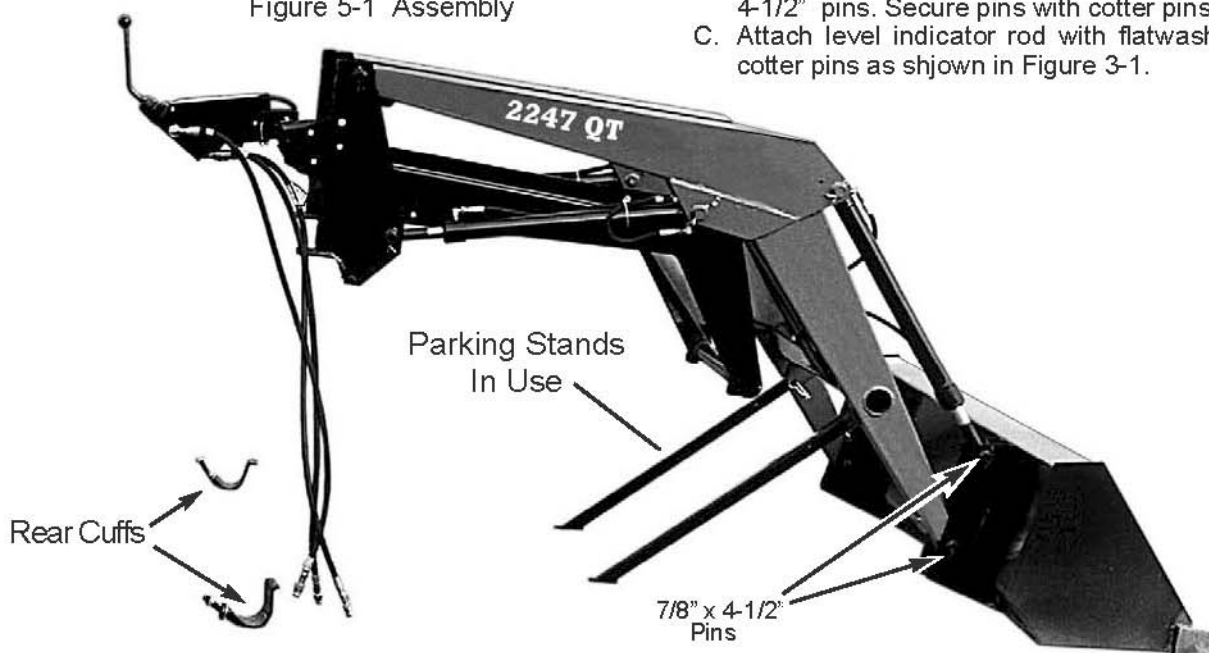
10. After completing assembly, thoroughly inspect the machine to be sure that all nuts, bolts, hydraulic fittings or any other fastened assemblies have been thoroughly tightened.
11. After completing assembly be sure that all safety locking devices or guards are in place.
12. Before operating the machine, thoroughly read the operation section of this manual.
13. Before operating, read the maintenance section of this manual to be sure that any parts requiring lubrication such as gearboxes are full to avoid any possible damage.
14. Wear personal protective equipment such as, but not limited to, protection for eyes, ears, feet, hands, lungs and head when assembling the equipment. Do not wear loose clothing or jewelry that may catch on equipment moving parts.

BEFORE OPERATING THE EQUIPMENT, IF YOU HAVE ANY QUESTIONS REGARDING THE PROPER ASSEMBLY OR OPERATION, CONTACT YOUR AUTHORIZED RHINO DEALER OR REPRESENTATIVE.

5-1 MAINFRAME ASSEMBLY

- A. Attach bucket to boom using two 7/8" x 4-1/2" pins. Secure pins with cotter pins. (Figure 5-1)
- B. Attach bucket cylinders to bucket using 7/8" x 4-1/2" pins. Secure pins with cotter pins.
- C. Attach level indicator rod with flatwashers and cotter pins as shown in Figure 3-1.

Figure 5-1 Assembly



5-2 CONTROL VALVE ASSEMBLY AND MOUNTING

A. Attach mounting bracket to loader frame using two 3/8" x 5" bolts, flatwasher, lockwashers, and nuts. (Figure 5-2)

B. Attach tube mount bracket to mounting bracket with two 3/8" x 1-1/4" bolts, lockwashers and nuts.

C. Attach tube to tube mount bracket using two 3/8" x 2-1/2" capscrews, flatwasher between bolt head and slotted hole, lockwashers and nuts.

D. Mount the valve mount bracket to the tube using the two 5/16" U-bolts, lockwashers and nuts. (Note: In some applications the tube may have to be shortened)

E. Mount the valve to the valve mount bracket. Use three 5/16" x 1" bolts, flatwashers and lockwashers.

F. Slide the hydraulic hoses from loader through the hose sleeve.

G. Connect the hydraulic fittings to the valve. Attach the hoses to the fittings, paying close attention to the color coding on the hose and the port to which it is connected.

H. After the hydraulics are properly connected, install the safety shield using four 1/4" x 3/4" bolts, flatwashers, lockwasher and nuts. Affix the valve control decal to the top of shield.

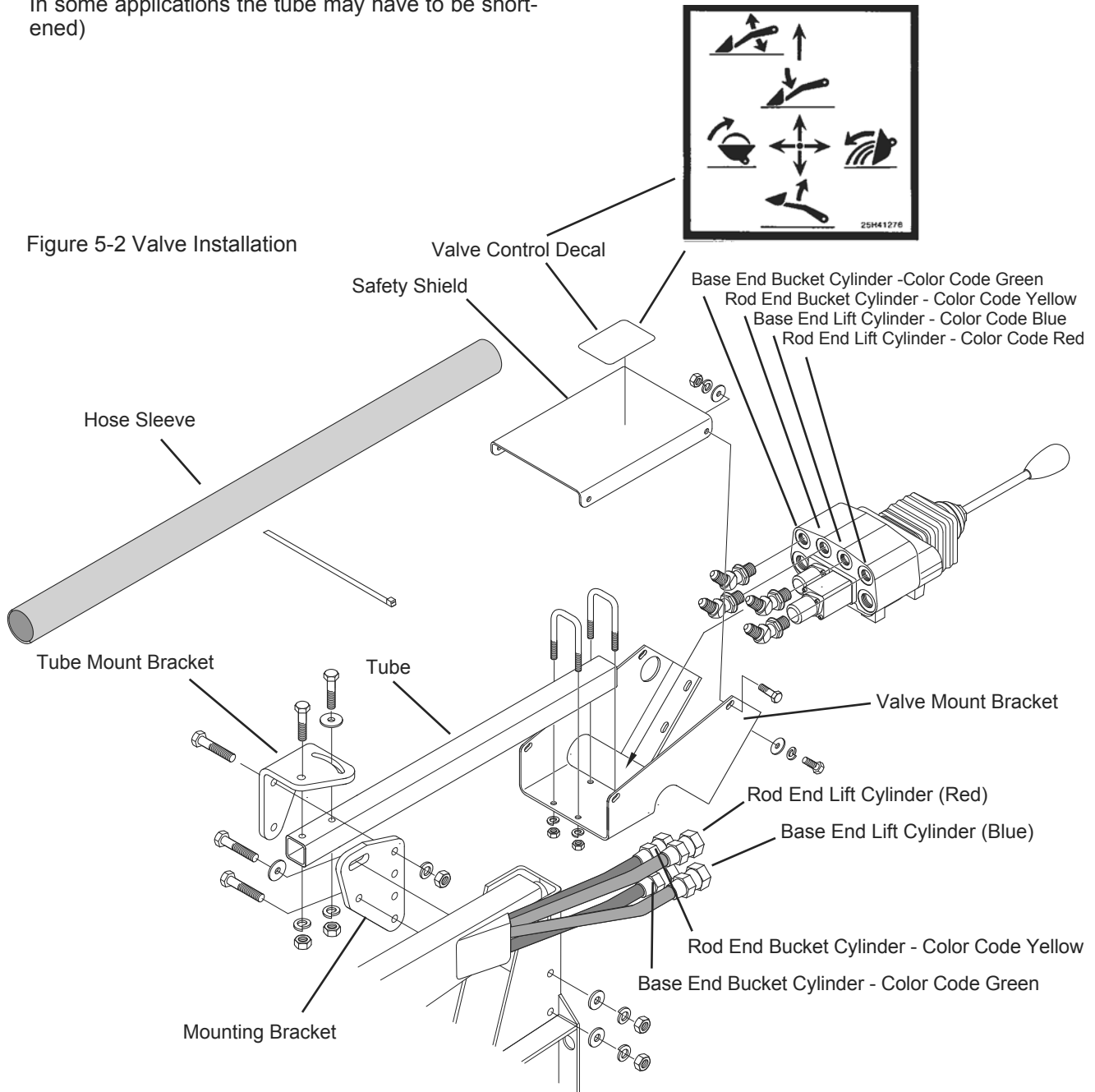


Figure 5-2 Valve Installation

5-3 POWER BEYOND KIT

This Kit is provided to relieve excessive pressure on loader control valve when other implements are used while loader is still attached to tractor.

Kit Includes:

ITEM	QTY.	DESCRIPTION
1	2	Cable tie
2	1	Elbow 90° 9/16" ORB to 9/16" JIC
3	1	Hydraulic Hose 1/4" - 9/16" JIC Female
4	2	Straight Fitting 9/16" JIC male to 3/8" Pipe male
5	1	Quick Coupler Assy.

***NOTE:** Power Beyond Plug is shipped in Control Valve package.

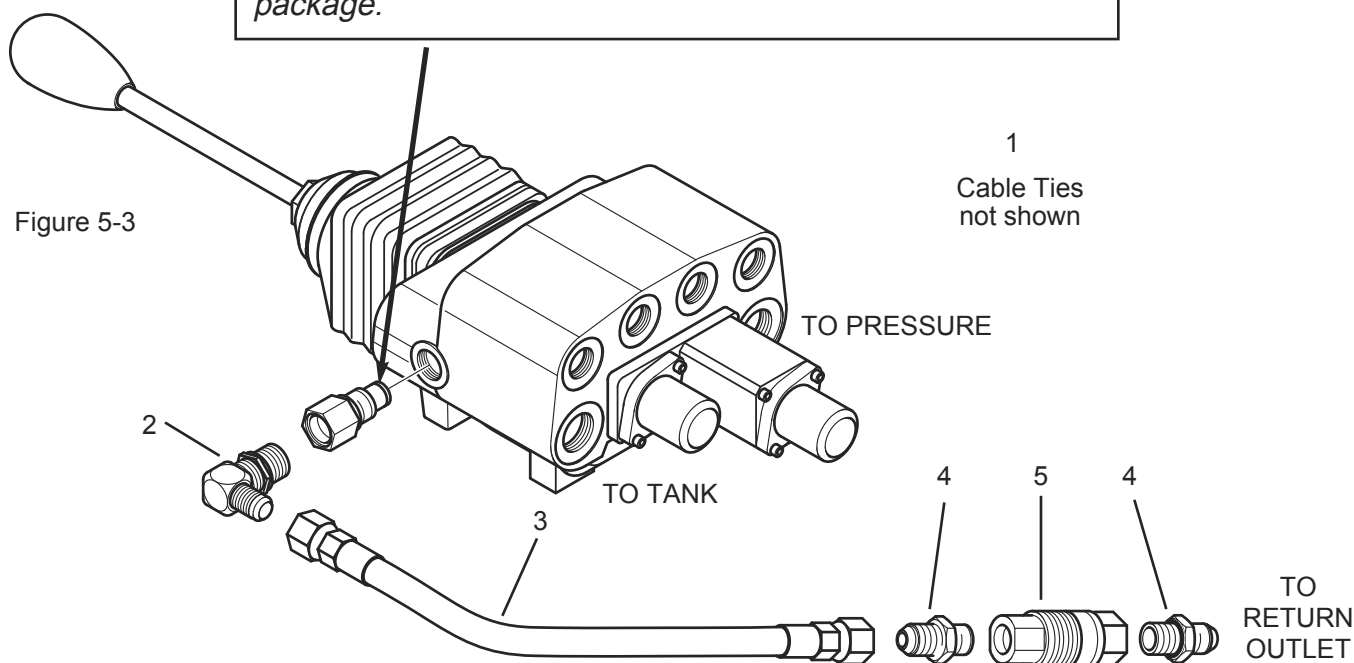


Figure 5-3

IMPORTANT: When Loader hydraulics are disconnected from tractor, the tractor hydraulic circuit must be completed by connecting pressure port to return port.

Failure to do this will cause serious damage to tractor hydraulic pump.

INSTALLATION INSTRUCTIONS

1. Remove plug from right side of valve.
2. Install power beyond plug in valve.
3. Install 90° elbow in power beyond plug.
4. Attach hydraulic hose to 90° elbow and route hose to return outlet on tractor.

NOTE: Additional fitting are required to attach hose to return outlet on tractor.

5-4 FORK LIFT ATTACHMENT

WARNING

TO AVOID SERIOUS INJURY OR DEATH:

- ★ NEVER LIFT LARGE ROUND HAY BALES OR OTHER LOADS ON THE FORK LIFT ATTACHMENT THAT COULD ROLL BACK ONTO TRACTOR OPERATOR AREA.
- ★ NEVER USE FORK LIFT ATTACHMENT TO LIFT OR SUPPORT PEOPLE.
- ★ TRANSPORT LOADS LOW AND SLOW.
- ★ AVOID CONTACT WITH POWER LINES.

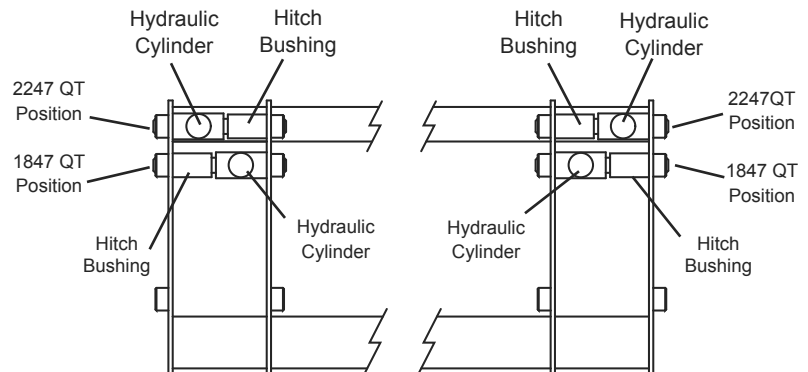
The fork lift attachment (Figure 5-4) is intended for handling palletized material. It is recommended that tractor be equipped with ROPS and seat belts. Use

the loader dump cylinders to give the forks the desired tilt. Position the forks on their support rods to the desired width so that the load will be carried approximately equal on each fork. Position load as far back as possible.

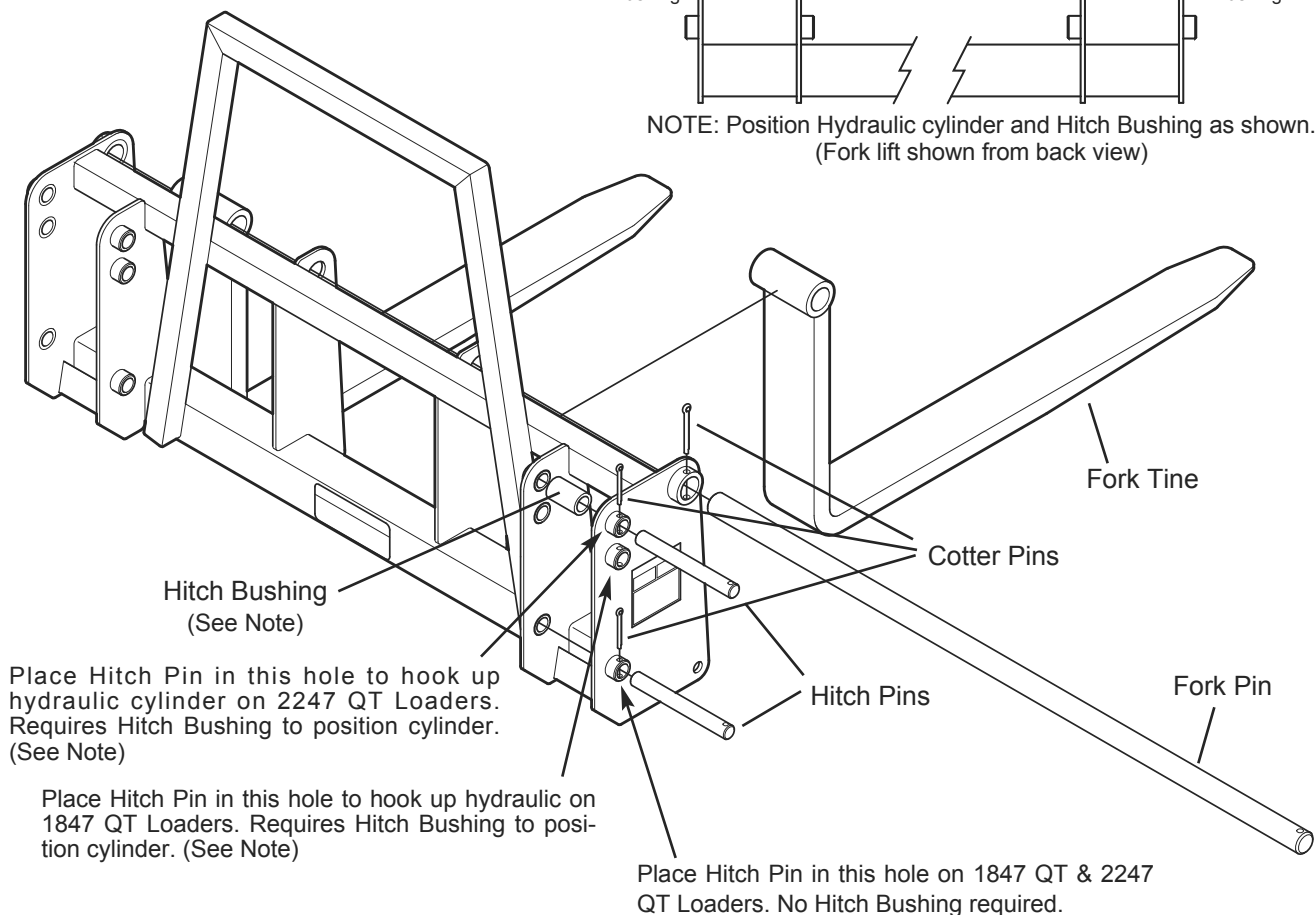
ASSEMBLY

1. Remove all cotter pins.
2. Slide fork pin out enough to place fork tine between bracket.
3. Slide fork pin through the fork tine and back through bracket and bushing.
4. Align cotter pin holes on fork lift frame and fork pin and replace bushing.
5. Spread cotter pin so it cannot work free.
6. The loader lifting capacity is approximately 75% of the rated capacity at 24" from the face of the fork tine.

Figure 5-4 Fork Lift Attachment



NOTE: Position Hydraulic cylinder and Hitch Bushing as shown. (Fork lift shown from back view)



Place Hitch Pin in this hole to hook up hydraulic on 1847 QT Loaders. Requires Hitch Bushing to position cylinder. (See Note)

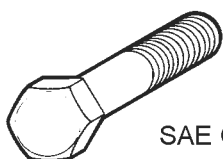
Place Hitch Pin in this hole on 1847 QT & 2247 QT Loaders. No Hitch Bushing required.

TORQUE SPECIFICATIONS

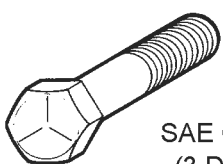
Proper torque for American fasteners used on equipment.
Recommended Torque in Foot Pounds (Newton Meters).*

AMERICAN

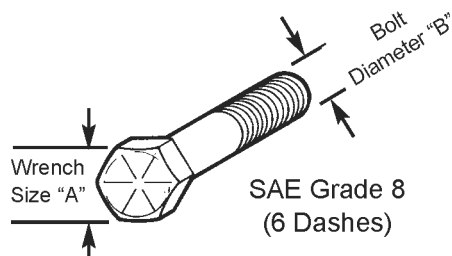
Bolt Head Markings



SAE Grade 2
(No Dashes)



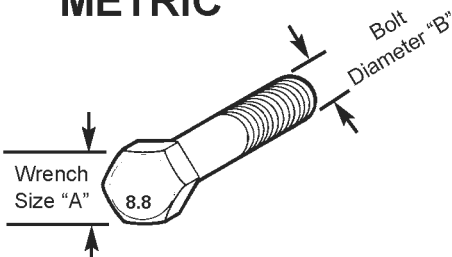
SAE Grade 5
(3 Dashes)



SAE Grade 8
(6 Dashes)

WRENCH SIZE (IN.) "A"	BOLT DIAMETER (IN.) "B" AND THREAD SIZE	SAE GRADE 2	SAE GRADE 5	SAE GRADE 8
7/16	1/4 - 20 UNC	6 (7)	8 (11)	12 (16)
7/16	1/4 - 28 UNF	6 (8)	10 (13)	14 (18)
1/2	5/16 - 18 UNC	11 (15)	17 (23)	25 (33)
1/2	5/16 - 24 UNF	13 (17)	19 (26)	27 (37)
9/16	3/8 - 16 UNC	20 (27)	31 (42)	44 (60)
9/16	3/8 - 24 UNF	23 (31)	35 (47)	49 (66)
5/8	7/16 - 14 UNC	32 (43)	49 (66)	70 (95)
5/8	7/16 - 20 UNF	36 (49)	55 (75)	78 (106)
3/4	1/2 - 13 UNC	49 (66)	76 (103)	106 (144)
3/4	1/2 - 20 UNF	55 (75)	85 (115)	120 (163)
7/8	9/16 - 12 UNC	70 (95)	109 (148)	153 (207)
7/8	9/16 - 18 UNF	79 (107)	122 (165)	172 (233)
15/16	5/8 - 11 UNC	97 (131)	150 (203)	212 (287)
15/16	5/8 - 18 UNF	110 (149)	170 (230)	240 (325)
1-1/8	3/4 - 10 UNC	144 (195)	266 (360)	376 (509)
1-1/8	3/4 - 16 UNF	192 (260)	297 (402)	420 (569)
1-5/16	7/8 - 9 UNC	166 (225)	430 (583)	606 (821)
1-5/16	7/8 - 14 UNF	184 (249)	474 (642)	668 (905)
1-1/2	1 - 8 UNC	250 (339)	644 (873)	909 (1232)
1-1/2	1 - 12 UNF	274 (371)	705 (955)	995 (1348)
1-1/2	1 - 14 UNF	280 (379)	721 (977)	1019 (1381)
1-11/16	1-1/8 - 7 UNC	354 (480)	795 (1077)	1288(1745)
1-11/16	1-1/8 - 12 UNF	397 (538)	890 (1206)	1444 (1957)
1-7/8	1-1/4 - 7 UNC	500 (678)	1120 (1518)	1817 (2462)
1-7/8	1-1/4 - 12 UNF	553 (749)	1241 (1682)	2013 (2728)
2-1/16	1-3/8 - 6 UNC	655 (887)	1470 (1992)	2382 (3228)
2-1/16	1-3/8 - 12 UNF	746 (1011)	1672 (2266)	2712 (3675)
2-1/4	1-1/2 - 6 UNC	870 (1179)	1950 (2642)	3161 (4283)
2-1/4	1-1/2 - 12 UNF	979 (1327)	2194 (2973)	3557 (4820)

METRIC



Numbers appearing on bolt heads
indicate ASTM class.

Proper torque for metric fasteners used on equipment.
Recommended torque in foot pounds (newton Meters).*

WRENCH SIZE (mm) "A"	BOLT DIA. (mm) "B"	ASTM 4.6	ASTM 8.8	ASTM 9.8	ASTM 10.9
8	5	1.8 (2.4)		5.1 (6.9)	6.5 (8.8)
10	6	3 (4)		8.7 (12)	11.1 (15)
13	8	7.3 (10)		21.1 (29)	27 (37)
16	10	14.5 (20)		42 (57)	53 (72)
18	12	25 (34)	74 (100)	73 (99)	93 (126)
21	14	40 (54)	118 (160)	116 (157)	148 (201)
24	16	62 (84)	167 (226)	181 (245)	230 (312)
30	20	122 (165)	325 (440)		449 (608)
33	22		443 (600)		611 (828)
36	24	211 (286)	563 (763)		778 (1054)
41	27		821 (1112)		1138 (1542)
46	30	418 (566)	1119 (1516)		1547 (2096)

*Use 75% of the specified torque value for
plated fasteners. Use 85% of the speci-
fied torque values for lubricated fasteners.

RHINO

LIMITED WARRANTY

1. LIMITED WARRANTIES

- 1.01. Rhino warrants for one year from the purchase date to the original non-commercial, governmental, or municipal purchaser ("Purchaser") and warrants for six months to the original commercial or industrial purchaser ("Purchaser") that the goods purchased are free from defects in material or workmanship.
- 1.02. Manufacturer will replace for the Purchaser any part or parts found, upon examination at one of its factories, to be defective under normal use and service due to defects in material or workmanship.
- 1.03. This limited warranty does not apply to any part of the goods which has been subjected to improper or abnormal use, negligence, alteration, modification, or accident, damaged due to lack of maintenance or use of wrong fuel, oil, or lubricants, or which has served its normal life. This limited warranty does not apply to any part of any internal combustion engine, or expendable items such as blades, shields, guards, or pneumatic tires except as specifically found in your Operator's Manual.
- 1.04. Except as provided herein, no employee, agent, Dealer, or other person is authorized to give any warranties of any nature on behalf of Manufacturer.

2. REMEDIES AND PROCEDURES.

- 2.01. This limited warranty is not effective unless the Purchaser returns the Registration and Warranty Form to Manufacturer within 30 days of purchase.
- 2.02. Purchaser claims must be made in writing to the Authorized Dealer ("Dealer") from whom Purchaser purchased the goods or an approved Authorized Dealer ("Dealer") within 30 days after Purchaser learns of the facts on which the claim is based.
- 2.03. Purchaser is responsible for returning the goods in question to the Dealer.
- 2.04. If after examining the goods and/or parts in question, Manufacturer finds them to be defective under normal use and service due to defects in material or workmanship, Manufacturer will:
 - (a) Repair or replace the defective goods or part(s) or
 - (b) Reimburse Purchaser for the cost of the part(s) and reasonable labor charges (as determined by Manufacturer) if Purchaser paid for the repair and/or replacement prior to the final determination of applicability of the warranty by Manufacturer.

The choice of remedy shall belong to Manufacturer.

- 2.05. Purchaser is responsible for any labor charges exceeding a reasonable amount as determined by Manufacturer and for returning the goods to the Dealer, whether or not the claim is approved. Purchaser is responsible for the transportation cost for the goods or part(s) from the Dealer to the designated factory.

3. LIMITATION OF LIABILITY.

- 3.01. MANUFACTURER DISCLAIMS ANY EXPRESS (EXCEPT AS SET FORTH HEREIN) AND IMPLIED WARRANTIES WITH RESPECT TO THE GOODS INCLUDING, BUT NOT LIMITED TO, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.
- 3.02. MANUFACTURER MAKES NO WARRANTY AS TO THE DESIGN, CAPABILITY, CAPACITY, OR SUITABILITY FOR USE OF THE GOODS.
- 3.03. EXCEPT AS PROVIDED HEREIN, MANUFACTURER SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO PURCHASER OR ANY OTHER PERSON OR ENTITY WITH RESPECT TO ANY LIABILITY, LOSS, OR DAMAGE CAUSED OR ALLEGED TO BE CAUSED DIRECTLY OR INDIRECTLY BY THE GOODS INCLUDING, BUT NOT LIMITED TO, ANY INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES RESULTING FROM THE USE OR OPERATION OF THE GOODS OR ANY BREACH OF THIS WARRANTY. NOTWITHSTANDING THE ABOVE LIMITATIONS AND WARRANTIES, MANUFACTURER'S LIABILITY HEREUNDER FOR DAMAGES INCURRED BY PURCHASER OR OTHERS SHALL NOT EXCEED THE PRICE OF THE GOODS.
- 3.04. NO ACTION ARISING OUT OF ANY CLAIMED BREACH OF THIS WARRANTY OR TRANSACTIONS UNDER THIS WARRANTY MAY BE BROUGHT MORE THAN TWO (2) YEARS AFTER THE CAUSE OF ACTION HAS OCCURRED.

4. MISCELLANEOUS.

- 4.01. Proper Venue for any lawsuits arising from or related to this limited warranty shall be only in Guadalupe County, Texas.
- 4.02. Manufacturer may waive compliance with any of the terms of this limited warranty, but no waiver of any terms shall be deemed to be a waiver of any other term.
- 4.03. If any provision of this limited warranty shall violate any applicable law and is held to be unenforceable, then the invalidity of such provision shall not invalidate any other provisions herein.
- 4.04. Applicable law may provide rights and benefits to purchaser in addition to those provided herein.

KEEP FOR YOUR RECORDS

ATTENTION: Purchaser should fill in the blanks below for his reference when buying repair parts and/or for proper machine identification when applying for warranty.

Rhino Implement Model _____ Serial Number _____

Date Purchased _____ Dealer _____

ATTENTION:

READ YOUR OPERATOR'S MANUAL

RHINO®

1020 S Sangamon Ave.

Gibson City, IL 60936

800-446-5158

Email: parts@servis-rhino.com





TO THE OWNER/OPERATOR/DEALER

To keep your implement running efficiently and safely, read your manual thoroughly and follow these directions and the Safety Messages in this Manual. The Table of Contents clearly identifies each section where you can easily find the information you need.

The OCCUPATIONAL SAFETY AND HEALTH ACT (1928.51 Subpart C) makes these minimum safety requirements of tractor operators:

REQUIRED OF THE OWNER:

1. Provide a Roll-Over-Protective Structure that meets the requirements of this Standard; and
2. Provide Seat belts that meet the requirements of this paragraph of this Standard and SAE J4C; and
3. Ensure that each employee uses such Seat belt while the tractor is moving; and
4. Ensure that each employee tightens the Seat belt sufficiently to confine the employee to the protected area provided by the ROPS

REQUIRED OF THE OPERATOR:

1. Securely fasten seat belt if the tractor has a ROPS.
2. Where possible, avoid operating the tractor near ditches, embankments, and holes.
3. Reduce speed when turning, crossing slopes, and on rough, slick, or muddy surfaces.
4. Stay off slopes too steep for safe operation.
5. Watch where you are going - especially at row ends, on roads, and around trees.
6. Do not permit others to ride.
7. Operate the tractor smoothly - no jerky turns, starts, or stops.
8. Hitch only to the drawbar and hitch points recommended by the tractor manufacturer.
9. When the tractor is stopped, set brakes securely and use park lock, if available.

☒ Keep children away from danger all day, every day...

☒ Equip tractors with rollover protection (ROPS) and keep all machinery guards in place...

☒ Please work, drive, play and live each day with care and concern for your safety and that of your family and fellow citizens.



**1847 QT/2247 QT
LOADER**

1847 QT/ 2247 QT-SOM-03/12
Printed U.S.A

P/N F-4369C